VOLUME II NUMBER 9

THE ELEMENTARY SCHOOL TEACHER
AND
COURSE OF STUDY

MAY, 1902

SPEECH, ORAL READING, AND DRAMATIC ART.

MARTHA FLEMING.

THE history in the sixth grade was early Greek—the myth-making period. Many old Greek and Latin stories and some tree-myths were read, among the latter the modern story "Old Pipes and the Dryad," by Frank R. Stockton. As soon as the children had read this story they proposed to play it. Last year some of them had written and acted a play founded on Irving's "Rip Van Winkle," and no doubt Old Pipes and his mother and the echo-dwarfs suggested Rip, Gretchen, and the dwarfs of the Catskills.

With the play in mind we re-read the story carefully to see whether it was the right kind of material for a play. Each child took a copy of the story, which he carried home and studied for himself. The children decided that they could make a play out of it. Next we retold the story in as few words as possible, rejecting everything not suitable for our purpose, and holding the whole together by the natural order of incidents. The divisions of the story we wrote on the board and considered as a unit.

Preliminary notes.—Old Pipes, helped up the hill by the children, discovers that his pipes are no longer heard by the cattle. He resolves to return the wages just paid to him. Release of the dryad. Old Pipes made twenty years younger. The cave of the echo-dwarfs. The angry echo-dwarf vows vengeance. He steals the pipes and attempts to shut the dryad

up again in her tree. The dryad shuts the echo-dwarf in the tree, restores the pipes to Old Pipes, and roams the forest for the remainder of the summer. The mother of Old Pipes is made twenty years younger. The discovery of the dryad's tree by the children. The dryad kisses Old Pipes and his mother again, lets the dwarf out, and goes back to the warmth and comfort of her tree.

Then we discussed the presentation of these different parts. We are without stage, curtains, scenery, or properties of any kind, and even without a platform. Everything had to be planned and made by the children. We were obliged to go over the details very carefully, and we rejected many things as impossible under the circumstances. The children drew on the blackboard the scenes as they would like to have them, and sketched the characters in costume, each giving his opinion freely and illustrating his ideas with the chalk. They made drawings of the mountains, the rocky path, and the dryad tree. Many of the elaborate plans for the scenery we were unable to carry out.

As we worked out the scenery and action, the dialogue developed. Each child contributed. One proposed a speech, the others considered and criticised. The final result in each case was written on the blackboard. In the Francis W. Parker School the whole text was written in this way. In the School of Education, after the first two scenes were written, each child completed the work for himself. Then we compared results and selected from the whole what we considered best. Some of the most dramatic actions and speeches came out at the very last rehearsal.

The whole now took shape on the stage. After the first full rehearsal the children felt that something was wrong, and they were discouraged. The next morning, before school, while they were talking it over, one remarked: "There is too much talk and too little acting in this for a play. It drags out too long." They then decided that they would act, and talk only when speech was absolutely necessary. The dialogue was cut wherever it was possible to substitute action that would tell the story.

Still there was great disappointment in the result. The children began to feel that they had made a mistake, and some

of them were quite ready to give up the play. One said: "There is not trouble enough in this story for a play. Things just go on. Enough does not happen." "Well," said another, "let us make more trouble. We don't need to have it just as it is in the story." They had made the discovery that the struggle between the good and the evil forces was not great enough, that the story itself was not sufficiently dramatic. This led to many interesting discussions and warm debates. A variety of plans was suggested, but finally it was agreed that the echo-dwarf was the mischief-maker, that the struggle was between him and the dryad, and that he might be allowed to plan a greater revenge and to carry his plans farther than in the story without interfering with the final outcome. He must steal the pipes, try to destroy them, then hide them, and proceed in his attempt to get the dryad back into her tree again; that the dryad must discover the plot just in time, and, after shutting the dwarf up in the tree, find the pipes and put all things right again. The children of the Francis W. Parker School allowed the dwarf to keep the pipes hidden over one night, thus causing Old Pipes and the villagers sore trouble. Except for the difference at this point, the two versions follow nearly the same lines. The dialogue varies, the language in many cases being entirely different, although dealing with the same situations.

One of our greatest difficulties was to end our play. The ending of the story the children would not consider at all. That no one should ever know what became of the dryad outraged all their sense of right. At first they proposed to end by leaving the dryad free. Later they decided this would not be an end at all. They objected to shutting her up again, but at last decided that, since the tree was her home, and she *wanted* to go back into it, and could shut *herself* in and could come out again in the summer, the real end was to let her do it. As she goes to her tree she kisses Old Pipes and his mother, who are enjoying their evening meal outside the cottage, leaving them each thirty years younger than they were at the beginning of the play.

We never talked about any other meaning to this story than

what lay on the surface. The children talked of the characters as real persons and of the incidents as real happenings. However, as we neared the time for presenting our work at a morning exercise, and they realized more and more the joy of the dryad in her own happiness and her delight in giving happiness to others, they called her the spirit of spring, of youth, of life, and of joy.

The rocky path and the cave of the echo-dwarfs we made of boxes, baskets, and benches covered with dark-gray cambric. The dryad tree was made in the manual-training room. It was a flat-surface frame, with the door opening outward. The frame was covered with heavy paper and calcimined to resemble the bark of an oak tree. Holes were bored in the wood and real twigs thrust in. The cottage of Old Pipes was a framework covered with cloth and calcimined a dull yellow. The latticed window, painted red, opened like a shutter.

The costumes were all simple, designed by the children, and constructed for the most part out of materials and costumes on hand. Old Pipes wore a hunter's dress; the dryad, a soft Greek robe; the dwarfs, gray suits in one piece, with pointed cap and shoes; the mother of Old Pipes, the dress of an old German woman; and the children, the dress of German peasant children, for somehow they had the impression that this was a German story.

OLD PIPES AND THE DRYAD.

(Played by sixth grade. Miss Curtis, teacher.)

Dramatis personae: Old Pipes; Echo-Dwarf and other dwarfs; dryad; mother; children—boys and girls.

SCENE I.

(A rocky path. A large oak tree at left. Cottage to right. Rustic seat and small table outside.)

Enter Old Pipes with children, two boys and a girl. Boys holding Old Pipes' arms, and helping him along. Girl pushing him from behind. He sinks exhausted on the seat. The children sit on the ground about him; each pulls a piece of bread from his pocket and eats.

Old Pipes. I am very tired tonight. I don't know that I could have climbed up this steep path to my home if you had not helped me. (Gives each of the children a copper coin.) I am sorry I tired you so much.

Boy. Oh, that would not have tired us, if we had not been so high up on the mountains for the cattle today.

Old Pipes (in great surprise). Had to go high up on the mountains for the cattle? What do you mean? (Girl goes behind Pipes, puts her hand on her mouth, and makes all sorts of signs to the boy to stop. He does not notice her.)

Boy. Why, you see, sir, that, as the cattle can't hear your pipes now, the chief villager has hired us to drive them down from the mountain every night.

Old Pipes (in great distress). How long have you done this? (Girl tries to stop the boy as before.)

Boy. Almost a year now. I think ever since the people felt that the cattle could not hear your pipes, and we have not heard the echoes for a long time. But we are rested now, and must go home. Good night, sir. (The children go, the girl scolding the boys all the way out.)

Girl. It was a secret. The old man did not know that the cattle can't hear him, and you have made him so unhappy.

Old Pipes (after sitting awhile silent and in deep trouble). Mother! mother! (Goes to the latticed window, where she sits spinning, and shouts again:) Mother! mother! (Old woman comes hobbling out; she is very deaf, and Pipes speaks very loud as both move toward the seat.)

Old Pipes. Mother, did you hear what those children said?

Mother (speaking in Pipes' ear). Children! I did not know that there were children here.

Old Pipes. Why, they say that the cattle can't hear my pipes any more, and that the villagers are paying me for nothing.

Mother (shouting). They can't hear you! Why, what's the matter with the cattle?

Old Pipes. Nothing's the matter with the cattle. It is with me and my pipes. But one thing is certain: if I do not earn the wages, I shall not take them. (Takes money from a bag that hangs at his side and counts it out.)

Mother (very angry). You piped the best you could, and what are we to do without the money?

Old Pipes. I don't know, but I shall go straight down to the village and give back the money they paid me today. (Starts off. Mother goes into the house, grumbling.)

Mother. Foolish! foolish! What are we to do without the money?

Old Pipes (dropping wearily under a tree). I cannot go tonight, I am too tired; but tomorrow— (Leans heavily against the tree; a tapping is heard; listens; it is heard again; listens; a voice is heard.)

Voice. Let me out, let me out.

Old Pipes (springing to his feet). This must be a dryad tree, and she wants to get out. I'll let her out if I can. It is summer time, and the moon rises tonight before the sun goes down; I must find the key, and if I do I shall surely turn it. (He goes all around the tree trying to turn every little bit of bark that he finds sticking out; one turns quite around.) Here it is! (A large part of the side of the tree is pushed open, and a beautiful dryad steps quickly out. She stands motionless, looking out over the mountains and all before her.)

Dryad. Lovely! lovely! How good of you to let me out! I am so happy, so thankful! (Kisses him on both cheeks.) Oh, it's glorious! glorious! I am so happy! What can I do for you, my kind friend?

Old Pipes (who has been gradually straightening up since receiving the dryad's kiss, is standing with eyes and mouth wide open, hardly able to speak for surprise). Well! well! I am glad that I let you out, but I must tell you that I turned the key because I wanted to see a dryad. I knew that your people lived in the trees, and that you were happy to come out in the summer time, and now I am glad that I let you out, because you are so happy; but if you want to do something for me, you can take this money down to the chief villager for me. It is the money paid me for calling the cattle home from the mountains. It is more than a year now since I have been able to make them hear my pipe, and I can't receive pay for what I cannot do.

Dryad (taking the money). To the village! I will go any place for you. Often, in my tree, I have heard the sweet notes of your pipes. (Moves away, looking at the beautiful things about her.)

Old Pipes (following her to the entrance, watching her as far as he can see). Now I have seen a dryad! (Begins to move toward the house, and notices how light and free he feels. Throws his arms about, and goes quickly to the house.) Why! I feel quite rested. I can walk quite easily. My! I feel so strong, and I am very hungry. I shall go home and eat my supper, and tomorrow go to the forest and cut some fuel for mother. (*Exit.*)

SCENE II.

(Same as scene 1. Time, the next evening.)

Enter Old Pipes, carrying a large armful of wood. He crosses the stage, and begins to pile it up against the side of the cottage.

Old Pipes. There, mother, I have done a fine day's work. If I keep on this way, we shall have plenty of fuel for next winter. Now it is time to call the cattle home. I must get my pipes. (Goes into the cottage, and comes out, followed by his mother.)

Mother. What are you going to do now? If you will not take the money, why will you pipe?

Old Pipes. I am going to play for my own pleasure. (Plays a strong, full note. A faint echo is heard.) Ha! ha! What has happened to my pipes? (Plays again.) They must have been stopped up of late, but they are as clear and good as ever! (Plays again. Echo is heard as before. Pipes looks up toward the mountains.) See, mother! see! the cattle are coming down as they used to do. (Rising as the truth flashes upon him.) O, I see it all now, mother! I had forgotten that a kiss from a dryad makes one ten years younger. She kissed me twice. I *am* really younger. Look! mother, look! (Begins a joyous dance across the stage to show his mother how young he is.) Come, come, mother, come! She must kiss you too! (Tries to pull her with him.) Well, then, I'll find her and bring her to you. (Dances off the stage in search of the dryad.)

Mother (looking after him in astonishment). He's bewitched! O Pipes! Pipes! when will you be old enough to have ordinary common-sense? (Turns toward the cottage.) He's bewitched!

SCENE III.

(Cave of the echo-dwarfs. Rocks lying all about.)

Dwarfs of all sizes running about, playing. One echoes back the sound of laughter that comes from the distance; another, the sound of a blacksmith's hammer; another, the call of a voice. One big, fat, lazy-looking dwarf is lying on a rock, sound asleep. The notes of Old Pipes' pipes sound in the distance. They all stop to listen and, when it is repeated, run to wake the big dwarf. He rolls to his feet, and begins to echo back the notes of the pipes. He is very angry at being disturbed, and, as soon as the piping stops, moves about shaking his head and fists and grinding his teeth.

Echo-Dwarf. I thought those pipes had stopped forever. I have been deceived. I'll go and find out how long this is to last. I will find the piper himself. (Starts to run off. Meets the dryad.) Ho! ho! what are you doing here? How did you get out of your tree?

Dryad. Doing! I am being happy, that's what I'm doing. I was let out by the good old man who plays the pipes to call the cattle home, and I've kissed him and made him young enough to play as well as ever.

Echo-Dwarf (pale with anger, moves toward her in threatening way). And you are the cause of this great evil that has come upon me? You are the wicked creature who has again started this old man upon his career of pipe-playing? What have I ever done to you that you should condemn me for years and years to echo back the notes of those wretched pipes?

Dryad (laughing merrily). What a funny little fellow you are! Anyone would think that you had been condemned to toil from morning till night. Fie upon you, Echo-Dwarf! You are lazy and selfish; and that is what is the matter with you. Instead of grumbling, you should rejoice at the good fortune of the old man who has regained so much of his strength and vigor. Go home, do your work, and learn to be generous, and then you may be happy. Good-by! (Moves off in the direction of the forest.)

Echo-Dwarf (growing more angry and more savage, dances about, shakes his fist, and shouts at the dryad). Insolent creature! I'll make you suffer for this! You shall find out what it is to heap injury and insult upon one like me. I have earned my rest by long years of toil. (Follows her, then turns back.) I'll find the piper, steal his pipes, and hide them!

SCENE IV. (SAME AS SCENE I.)

Enter Echo-Dwarf from behind the cottage. He looks all about. Old Pipes comes out, looking about; dwarf grinds his teeth, and motions that he would like to kill Old Pipes, but runs after him and stops him.

Echo-Dwarf. What are you looking for, old man?

Old Pipes. I am looking for a dryad whom I let out of her tree. She kissed me twice, and made me young enough to call the cattle home again, and I want her now on account of my old mother. I want to ask her to make my mother younger, as she did me. When I was old myself I did not notice how feeble mother was. Now it shocks and grieves me.

Echo-Dwarf (his eyes glistening). That's a noble idea! But you know a dryad can make no person younger but the one who lets her out of her tree. But, then, that is easy. You must find the dryad, tell her what you want, and ask her to step inside her tree; you shut her in and run for your mother. She will open it, let the dryad out, and you will have your wish.

Old Pipes. Good! good! I will go at once, but I must first get my pipes, lest I should be late in returning.

Echo-Dwarf (rubbing his hands in glee). She is quite foolish enough to do it. Then, when he goes for his mother, I'll take a stone and break off the key, so nobody can ever turn it again. She shall see! she shall see! (Enter Old Pipes.) Take me with you; you can carry me on your shoulder; and I'll help you. (Old Pipes picks him up. The dwarf snatches the pipes, and begins to bend and bite at them. They move on. Soon the dwarf catches sight of the dryad in the distance. Before she enters, Old Pipes discovers his loss, and is hunting for the dwarf when the dryad enters.) Oh, there she is! Put me down. Don't tell her I suggested the plan. (Old Pipes puts him down; he runs off with the pipes and hides, but watches and listens. Enter dryad.)

Old Pipes. I have been looking everywhere for you. Mother looks so old and feeble. Will you go into your tree for a few minutes? and I'll run and bring her to open it. Then kiss her as you did me just after you come out.

Dryad (looking sadly at Pipes). I should dislike it dreadfully, but if you wish it — (Moves toward the tree, enters.) I have thought of making you happier, and I have waited about your cottage many days for your mother; but she does not come out, and a dryad cannot enter a house. If you can get her to come out, I can make her younger any time without going into the tree. (The echo-dwarf grows so anxious that he moves into sight. The dryad sees him.) Did you think of this plan of shutting me up yourself?

Old Pipes (hesitating). No, no; a little dwarf, whom I met, proposed it to me.

Dryad. Oh, I see through it all. It is the scheme of that miserable echo-dwarf, your enemy and mine. Where is he? (Dwarf hides. Pipes looks about.) There he is. (Pipes sees him. The dwarf tries to escape, but the dryad catches him, and drags him to the tree.) We will put him in here. (Old Pipes helps to thrust him in.) Now we will shut him up, and I shall be safe from his mischief for the rest of the time that I am free. (Shuts the door. There is a clicking sound of bark and root as the tree closes.) There, no more need to be afraid of him.

Old Pipes. Oh, my pipes! The rascal has stolen them! (Both search all about, and at last discover them under a rock. Old Pipes busies himself repairing them. Dryad helps. Pipes blows on them, making no noise.)

Dryad. Now, will you not ask your mother to come out and meet me?

Old Pipes. Oh, it's no use. We must find some other way. She does not believe in dryads. She has forbidden me even to speak the name to her again. She says that I have been bewitched by a sorceress. (*Exeunt* together.)

Enter children, girl and small boy racing after the larger boy. He drops, breathless, under the oak tree.

Large boy. Ha! ha! you did not catch me, after all! (A knocking is heard. All listen. Again the knocking is heard, also a voice, pleading.)

Voice. Let me out! Let me out! (All start up.)

Large boy. Oh, this is a dryad tree, like the one Old Pipes found! Let's let her out. (Hunts for the key.)

Girl (pulling him away from the tree). No, no; what are you thinking about? I am the oldest here, and I am only thirteen. Do you want us all to be turned into crawling babies again?

Large boy. I want to see her! I want to see her!

Small boy (tugging at large one). No, no; every kiss from a dryad makes one ten years younger, and I am only nine. Where would I be? (Both pull at large boy.)

Girl. Are you crazy? Run! run! run! (All run as fast as their legs can carry them.)

Enter mother.

Mother. Alas! alas! the time has come when I am too old to work. I

have grown utterly useless. Someone else will have to cook and sew for my son. I wonder where he is. (Looks for him, but sinks exhausted into the chair, and soon falls asleep. The dryad enters, steps up lightly, and kisses the mother on both cheeks.)

Dryad. Now Old Pipes has his wish, and he will be happy. (Disappears.)

Mother (waking, yawns, stretches herself). My, how a little sleep does refresh one! It is astonishing how well I feel! (Moves about quite easily, and, finding that she can walk without her cane, drops it, and turns quickly toward the cottage.) I must hurry; my son will be here in a few minutes, and his supper must be ready. I do feel so well. (*Exit.*)

Enter Old Pipes with his pipes.

Old Pipes. This is the last time that I shall call the cattle down this year; the nights are growing colder, the mountains are bare, and the winter will soon be here. (Sits and begins to play. Echo is heard from the tree.)

Enter mother. She brings forward the little table, and sets the supper on; then seats herself beside Old Pipes, and, with a smile, watches the cattle coming down. Both begin to eat.

Enter dryad.

Dryad (shivering). The night winds chill me. How happy they look there together; but I do not believe it will hurt them to be a little younger. (Steps up lightly and kisses each of them once. The mother kisses her son. Dryad shivers again.) I must get back into my comfortable home in the oak. (Goes to the tree, turns the key, and calls to the dwarf:) Come out. Winter is coming. I want the shelter of the tree myself. The cattle have come down for the last time this year, the pipes will sound no more, and you can go to your rocks and have a holiday until next spring. (Echo-Dwarf skips out, and runs away among the rocks.) Now he can break the key, it does not matter. Another will grow out in the spring, and I know that, when the warm days are here next year, the piper will come and let me out. (Shivers again, wraps her robe about her, enters the tree, and pulls the door after her.)

A PLAY OF GALAHAD.[1]

(FRANCIS W. PARKER SCHOOL.)

JENNIE HALL.

I have told stories of knights to the pupils of the second and third grades, hoping that the high examples of kindness, cour-

[1] Some discussion has been caused in the school by this paper. Since many of the teachers did not see the work that is described, the discussion has been upon the general question: "Are the stories of knights fitted for the third grade?" The principal objections are that knighthood and chivalry are based on ideas and emotions which develop later than the age in third grade, and that, even if the children, through the influence of the teacher, feel the emotions appropriate to this literature, they have no right to such emotions, because they are unsupported by their own experience.

age, courtliness, all swimming in the childish glamour of strange adventure and curious costume, might influence the thought and action of the children in the direction of those ideals. A secondary consideration was that the subject is full of beauty.

After they had heard the story of Sir Launfal and of Ogier, and had made a little study of castles and of armor, a few of the children wrote original tales of knights. The following is one of them and is typical of all:

Once there was a knight that was brave. The knight lived in a castle. His name was Sir Longfoot. One day he went to hunt. He came to a bridge. The bridge was not very strong. The knight rode over the bridge. The bridge fell together. The knight fell into the ditch. His horse fell in, too. The knight got out and pulled his horse out. So he rode farther. He saw some strange knights coming.

He said to his horse: "Get up!" His horse ran as fast as he could. Soon they were out of sight. He said to himself: "Oh, if I were home!"

He came to a castle just like the one he lived in. He blew his horn. A man looked out of a tower.

"Go away," he said.

The man shot with his bow and arrows. The knight's horse ran as fast as he could. The knight came to a forest. He saw a boar. The boar rushed at the knight's horse. The knight killed the boar. He took off the skin and laid it away. He made a fire and roasted the meat of the boar. He saw his friend. He said: "Come eat with me."

So they ate the meat of the boar.

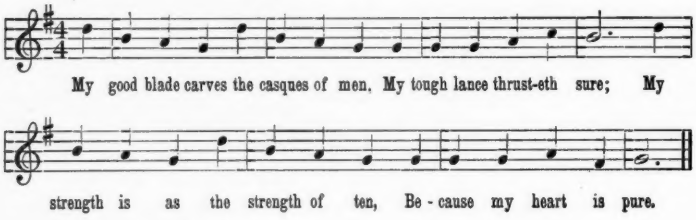
"Shall we go home?" said his friend.

"Yes," said the other knight.

So they went home. When they got home they saw their enemy coming. They let down the drawbridge. The two knights ran in. They pulled up the drawbridge. The knights outside made a movable tower. All the men got in. A wheel fell off the tower. The tower fell over, and the men were killed.— *Ernst Sieck, third grade.*

It is evident that so far only the physical facts of knighthood had caught the child's fancy. That was necessary first. I chose now to tell the story of Galahad because of its emphasis upon the spiritual virtues of a knight and because of the softening, mystic influence of the Holy Grail. To make the story intelligible it was necessary for the children to know King Arthur and the Round Table, themselves examples of noble purpose. I did not expect the children to make the allegorical interpreta-

tion of the Holy Grail that we are used to make, but to image in its bare simplicity the fact that strong men were willing to endure much for the sake of seeing the cup that Christ had touched, and the fact that a knight wished to be something else than merely a good fighter. The effect of such work is a very intangible thing to look for. The place where one would hope to see it is in the children's treatment of one another. But that ground is so near the borders of cant that I fear to tread it in daylight. There are, however, some outward signs that I can tell. One is the hold that the story took upon the imaginations of the children. They like it better than any other story. In all their play and retelling they have handled the tale and the characters with a sort of reverence. They bring to school stories that they have written at home about knights. One boy made and brought to school a suit of link armor. Several boys have brought swords. These things have been worn with great delight, but calmly, as though it were a natural thing. At my suggestion that we make a knight song, one boy came to school and sang the following air, which he himself had made for a part of Tennyson's "Sir Galahad," which I had read to the children many times and which they enjoyed:


My good blade carves the casques of men, My tough lance thrust-eth sure; My
strength is as the strength of ten, Be - cause my heart is pure.

After about two weeks one of the girls said: "We ought to have a song with words that we made ourselves." We straightway set to work, all together, and composed the following:

One night, when it was cold and dark,
An old, old man came down the shore.
From Uther's castle he had come.
He stood and heard the great sea roar.

He thought that it was all the sea,
But far he saw a flaming wave,
And in that wave a baby lay.
The great wave tossed it on the shore.

Old Merlin picked the baby up.
He said: "This baby shall be king.
King Arthur is this baby's name,
And he shall be the best of kings."

The method of composition was that one child suggested a line and the others criticised it as to idea, diction, rhythm, and re-formed it until it was satisfactory to all. The fourth and twelfth lines are the teacher's.

It was under this intense interest that we planned for morning exercises a play founded upon the story of Galahad. It seems to me that it spoke favorably for the fitness of the story that, during the rehearsals, action and dialogue seemed to grow of themselves, that the children were happy in the performance, that they were earnest and natural in character. They wished to rehearse it every day. They have given it twice since morning exercises for people who did not see it before. The last time one boy said: "Oh, it's such fun to play this. I wish we could do it every day."

I give the dialogue without retouching:

SCENE I. THE CASTLE.

(King Arthur and knights seated at Round Table.)

A knight. That was a fine hunt that we had yesterday.

All. Yes. (Woman enters.)

Woman. I wish to see Lancelot.

Lancelot. Here I am.

Woman. Come with me.

King. Why?

Woman. I cannot tell. (To Lancelot.) Come with me. (Starts off. Knights and king stare.)

Lancelot (to king). Shall I go?

King (hesitating). Yes, you may go. (Lancelot and woman go off. Knights are silent a moment.)

A knight. Let us go for a hunt.

All. Yes, a hunt! (They go off.)

SCENE II. THE CHURCH.

(Galahad kneeling before altar. Armor on altar. Lancelot and woman enter.)

Woman (pointing to Galahad). Make him a knight.

Lancelot. Rise so that I may see whether you are worthy to be a knight. (Galahad rises. They look each other long and earnestly in the face.) Kneel. (Galahad kneels to Lancelot.) Do you promise to speak the truth?

Galahad. Yes.

Lancelot. Do you promise to be brave?

Galahad. Yes.

Lancelot. Do you promise to help the poor?

Galahad. Yes.

Lancelot. Do you promise to fight for the right?

Galahad. Yes. (Lancelot gives Galahad three strokes with his sword.)

Lancelot. Rise, Sir Knight. (Lancelot goes off to castle. Galahad goes behind scenes.)

SCENE III. THE CASTLE.

(King and knights come in and sit down.)

A knight. That was a good hunt.

All. Yes.

Another knight. I followed that deer for three miles. (Man rushes in.)

Man. A wonder! A rock is floating on the river. A sword is stuck in it. (All look surprised.)

King. Shall we go and see?

All. Yes, let us go.

King (to man). Show us the way. (All go off to river.)

SCENE IV. THE RIVER.

Man. See! Here it is.

A knight. There are words on the handle.

Several (reading). "For the one perfect knight of the world." (All look at one another in wonder.)

King (to a knight). Draw it out.

Knight. I am not the one perfect knight of the world.

King (to another). You draw it out.

Knight. I am not the one perfect knight of the world.

King (to Lancelot). Surely you can pull it out.

Lancelot. It is not for me. (So all the knights in turn.)

King (to Lancelot again). Try it. (Lancelot tugs at sword, but fails, and turns sadly away. So all the knights. They go slowly and sadly back to castle and sit.)

SCENE V. THE CASTLE.

Percivale. It is too bad that we have not the one perfect knight in our kingdom.

King (sadly). Yes.

A knight. If he were only here! (Joseph of Arimathæa enters leading Galahad.)

Joseph (to king). This is Galahad, the one perfect knight of the world.

All (in hushed voices). Galahad!

Bors. We have heard that name before.

Percivale. Are you the one that Merlin said should sit in Siege Perilous? (Knights whisper together.)

King (to Galahad). Are you willing to go down to the river and draw the sword out of the rock?

Galahad. You see I brought my scabbard empty because I knew a sword was waiting for me here.

King. Let us go. (They go off joyously.)

SCENE VI. THE RIVER.

(Galahad draws sword out easily and puts it into scabbard. He smiles at king. Knights grasp his hand and clap him on the shoulder. All go back to castle.)

SCENE VII. THE CASTLE.

(Knights see gold letters on Siege Perilous. Pantomime of awe. Galahad sits slowly down in Siege Perilous. Storm told by piano.)

Knights (in fear). A storm! (Storm ceases. Holy Grail appears. Knights stand and look.)

Knights (in hushed voices). The Holy Grail! (Holy Grail disappears. Knights sink into seats.)

A knight (rising and holding sword before him). I vow to seek the Holy Grail. (All the knights in turn do the same.)

Galahad. I vow by the cross on my sword to seek the Holy Grail. (All go off behind the scenes.)

SCENE VIII. THE CHURCH.

(Priest stands looking at shield on altar. Galahad enters.)

Priest. Are you Sir Galahad?

Galahad. Yes.

Priest. Here is your shield. It has been waiting for you many years. Joseph, the friend of Christ, once owned it. Before he died he gave it to a friend. He marked this cross on it with his blood. The friend gave it to me and told me to keep it for Galahad, the one perfect knight of the world. (Galahad takes shield and goes off behind scenes.)

SCENE IX. THE CASTLE.

(King and knights, except Percivale and Galahad, come in and sit.)

King. So none of us saw the Holy Grail after all.

All (sadly). No.

A knight. Percivale and Galahad have not come back.
Another. I wonder whether they saw it. (Percivale enters.)
All (standing and crowding around him). Percivale!
A knight. Welcome, Percivale!
King. Did you see the Holy Grail?
Percivale. Yes.
King. Did you see it uncovered?
Percivale. Yes.
All. Tell us about it. (Percivale takes his seat.)
Percivale. After I had been away for many days I met Galahad, and we went on together. We went through the country doing many wonderful things. One day we went up a mountain, and, when we were on top, the mountain caught fire. I said: "We must run. We shall be burned up." But Galahad ran down the mountain through the fire. He crossed some bridges. The bridges burned after him. When he crossed the last bridge he rose into the air, and the Holy Grail hung over his head uncovered. It showed him the way. I saw the gates of heaven open, and he went in. I heard wonderful music, as if a great city was welcoming home its great man. That is how I saw the Holy Grail.

The children have written papers explaining some of the processes of the play. Below is one of them:

Miss Hall told a story of King Arthur and his Round Table. Someone said: "Let's have a play." We thought that would be a nice idea, so we got a big chair for the king and smaller chairs for the other knights. We got small, square tables and put them in a round shape. Then we put the chairs around the tables. Each knight had his own shield and sword. We did not have enough shields, so we made them. Some had wooden shields and some had cardboard. King Arthur was sitting in his throne and all the knights around his table. The queen was sitting a little way off from the table. We had the castle on the stage. The seats of the audience were around the room, and the rock was in the middle of the room. It was a waste-basket with cloth around it and a sword stuck in it. The children chose who would act. For the play Holy Grail, Miss Hall lit the electric light, and all the knights stood up. Then Miss Hall turned off the light, and the knights said, "The Holy Grail!"—*Lucile Frost, third grade.*

I encouraged simplicity of staging. The value of scenery and costume is to create in the players the correct spirit by putting them into the proper environment and to help the audience to more vivid images. I feared in this instance that it would do neither, because the costumes that we could make would be so crude that they would hinder correct imaging and

feeling, and because the stiffness and awkwardness of armor, I was afraid, would draw the attention of the players from their character to the costume itself. Galahad, however, wore practicable toy armor that he had, and every knight had a shield and a sword, as told in the above paper. It was interesting to notice that as the children's interest in the play increased their desire for costume waned, so that they often played even without swords, pretending everything.

At first we planned to draw the curtain between every two scenes and have a committee shift the setting. The children were dissatisfied, however, because it required much time and made much noise. They could think of no other plan, so I suggested having three set places — the castle on the stage and the rock on the floor, as told in Lucile's paper, and a white-draped table with candle and stick on another part of the floor for church.

The point upon which we had the most discussion was the appearance of the Holy Grail. The children wished to manipulate some sort of material cup. We had many delighted inventions for sliding a cup down a white cloth, lowering a cup from the ceiling by pulleys, letting down a picture of a cup and a beam of light. I asked how they thought people would feel if they really saw the Holy Grail. Then I said that I feared our audience would laugh if they saw our tin cup drop down, or that at least they would know what it was, and would not think it wonderful or beautiful. At last somebody suggested the use of the electric lights. These are hidden overhead, so that the audience did not see the Holy Grail. In one of the papers not published a girl said: "The people knew it was the Holy Grail by the knights' faces and by their saying, 'The Holy Grail!'"

After this work with Galahad I expected a little advance in the children's conceptions of knightliness. I give one story that has since been written, to show what did occur:

Once upon a time there was one knight fighting with an army of robber knights, and he took his horse and jumped on it, and then he took his spear and took his sword out of his scabbard, and then he fought all the robber knights. After a while Galahad saw some robber knights robbing a lady, and

Galahad took them prisoners, and the robber knights stayed in prison for three years, and when the three years passed they promised to be brave and fight for the right; and after a while the robber knights were brave and true. —*Elmer Meier, third grade.*

TEXTILES.

CLARA ISABEL MITCHELL.

(Outline for a year's work in the textile arts, with suggestions as to lessons in related subjects. Continued.)

FIFTH GRADE.

Basketry.—Baskets, bags, mats, and hats of rattan, raffia, cord, palmetto, and native grasses.

Weaving.—Rag rugs; coarse cotton or linen fabrics on large hand-loom.

Sewing.—Making of Puritan Colonial costumes for Thanksgiving festival. French fell, tucking, making of button-holes. Pattern-drafting.

Embroidery.—Study and adaptation of the "Colonial" patterns and stitches on linen, with home-dyed threads.

Nature study.—Invention of practical loom. Raising of grasses valuable in basketry. Experiments with metal mordants.

History.—Colonial life in New England; comparison of New England, New York, and Virginian colonies as to religion, home life, occupations and arts, and government; excursions to mills; observation of the Jacquard loom.

Geography.—The continent of North America; influence of topography, soil, and climate upon aboriginal tribes; greater fitness to the requirements of civilized people; its force as shaping life in the colonies; natural routes of travel; extension of colonies.

SIXTH GRADE.

Basketry.—As in fifth grade.

Weaving.—Fire-screen, small rug, cushion-cover, or smaller article of wools or heavy silks, in tapestry style of original pattern.

Sewing.—Making of Greek costumes for autumn festival. Various costumes needed by children in lower grades; skirt-making, bias seam; pattern-drafting.

Nature study.—Examination of wool, cotton, linen, silk, hemp, ramie, and jute fibers under microscope; chemical tests of fibers; continuation of the study of physics in connection with the running of sewing machine and loom.

History.—Influence of wool-growing in the commerce of early Greece; Miletus compared with other Greek cities.

Geography.—Mediterranean region; Greece; scene of Greek colonies; something of the influence of topography, soil, and climate upon the history of Greece.

PHYSICAL TRAINING.

CARL J. KROH.

THE gymnastics for the pedagogic class during the spring quarter, designed to supplement the work of the first and second-year students who had qualified for practical gymnasium work, comprised progressively arranged apparatus series and gymnastic themes, modified and adapted in accordance with the general scheme of school gymnastics involving grade aims. These exercises were regularly preceded by short adaptations of preparatory or related forms of free exercises. The employment of hand apparatus during the free exercises was suggestive of forms of exercise leading to special skill. Outdoor practices in field exercises and sports were studied with special reference to their character and legitimate place in the intermediate and grammar grades, as determined by the proficiency of the pupils engaging in them, and to the regulation of this branch of exercise.

Methods of class, as well as graded group, gymnastics included index records of work and progress achieved; also records of tests of strength, endurance, and skill.

The discussions embraced, in part, a consideration of gymnastic and athletic action-forms, of typical apparatus and field forms, and their values, gymnastically, as exercises promoting strength, endurance, and skill; form, symmetry, co-ordinate action. Modifications of definite action-forms and the adaptation of typical gymnastic orders to different classes under varying conditions, including choice of apparatus and adjustment, together with a study of preparatory or related forms of exercise, broadened the conception of possibilities, and disclosed many ways of reinforcing progress in gymnastics in classes of varying sizes. Gymnastic nomenclature proved an interesting feature in these discussions.

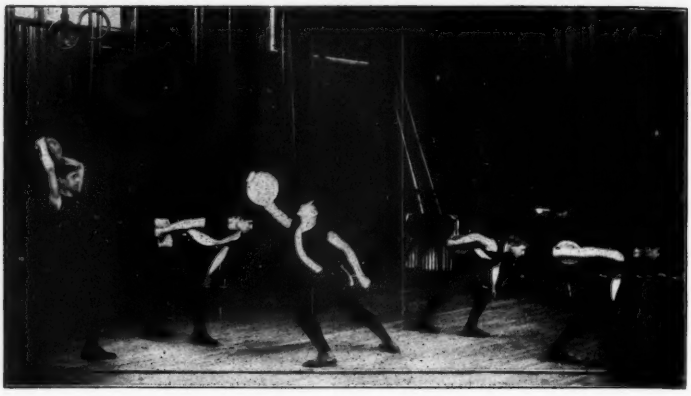
Topical recitations, based on observations of the human body, were supplemented by a study of anatomical models, and included reviews of the skeletal and muscle structures and form, muscular movement and extent of action, and the mechanism of typical gymnastic action-forms.

The students were enjoined to observe the regular lessons of the grades and the outdoor practice on the school playgrounds.[1]

SPORTS, GAMES, AND PLAYS.

QUOIT-PITCHING.

The distinction between quoit-pitching and discus-throwing, between which there is a resemblance, is, that in the former the final movement of lunging forward, to lend force to the arm and body action, is omitted. In the position of the right-handed quoit pitcher the foot of the same side is



THROWING THE DISCUS.

usually set forward, the first and the second movements of the discus thrower being reproduced. The movements are not so vigorous as in the hurling of the disc, which is done to cover the greatest possible distance,[2] whereas quoits are pitched over a course agreed upon, toward stakes placed at both ends and projecting a few inches above the ground at a distance of from 35 to 40 feet to as many yards. The width of the course need not exceed 10 feet. Soft turf is the best ground.

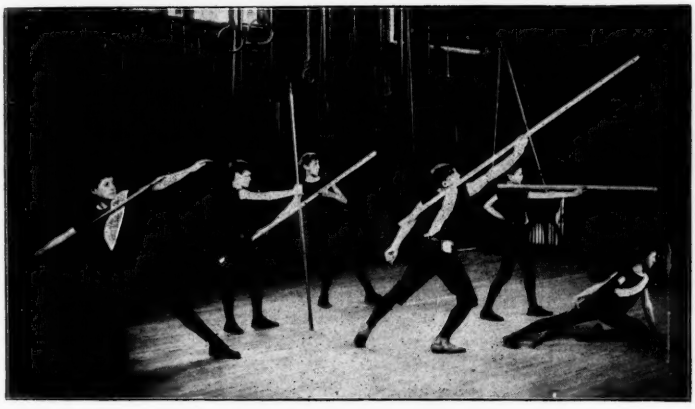
Quoits are convex on the upper side and slightly concave on the other. The edges should not be too blunt, in order to allow imbedding in the ground and to prevent rolling. The center of the quoit is hollow, the ring being indented to facilitate grasp of thumb. Size, 6 to 8 inches in diameter; weight, 2 to 5 pounds.

[1] See, in grade outlines, memoranda of exercises in tactics, tacto-gymnastics; dancing exercises, roundels, apparatus gymnastics; games and plays.

[2] World's record, 122 feet, 3⅝ inches. Size of antique disc, 20 centimeters; weight, 2 kilograms. Modern, 4 inches, 3½ pounds.

As a game, quoit-pitching may be practiced in pairs, or by sides, or by teams, the individual players being provided with two quoits each, and pitching in the order determined in the preliminary trials, according to proximity to stakes. The preliminary trials are made by the teams separately; in the game the players of the respective teams alternate in pitching. Quoits should be pitched at an angle of about 45 degrees, and be given a rotary motion to steady their course.

Scores include "ringers," *i. e.*, two points made by encircling the stake, or "hob." Distances are measured from the hobs to the edges of the two



THROWING THE SPEAR.

nearest quoits, and count one point for each. Displaced quoits are scored according to their final positions. Quoits which have rolled, as well as those with the convex side uppermost, are not scored.

POLE-VAULTING.

The pupils, provided with vaulting poles,[1] are aligned in files corresponding to the number of running courses available. Distances between files and ranks measure from 6 to 8 feet. Mats with rubber-covered spring-boards, placed close, are provided for each course at a distance from and in front of

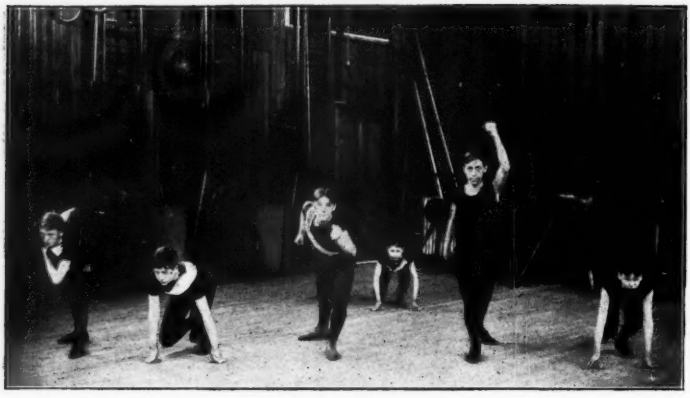
[1] The iron-banded hickory poles, 8 to 10 feet in length, with blunt ends, sold by the Gloy Co., Chicago, at $4 per dozen, are suitable for all class purposes, for boys as well as girls. The regulation poles are made of hickory, spruce, oak, pine, or ash, spruce and ash being preferable. They are 16 feet in length, an inch and a half in diameter, and cost from $3.50 to $6 each. Hollow spruce poles, lighter and stronger, cost from $8 to $10 each.

the class.[1] Pupils leave heads of files and align at ends, passing same sides after each exercise, the class moving forward in the direction of the starting places with each succession.

PRELIMINARY CLASS EXERCISES.

(Poles placed next right sides, grasped at height of shoulders. Exercises are executed left as well as right.)

Stride position backward right, pole held horizontally, at height of hips, and directed to the front — 1 ! (The right hand glides upward to grasp height of reach, the other hand "overgrasping" the pole, arms outstretched, about



STARTS IN SPRINTING.

shoulder width apart.) Bend right knee, pushing the pole backward by bending the forward arm height of chest — 2 ! First position (as 1) — 3 ! Fundamental position — 4 !

Repeat, stretching right and bending left knee, lowering the forward end of the pole at "3 !" Resume fundamental position at "4 !"

Repeat, bending right knee in the first position, and the left knee to plant the pole in the second position; resume first and fundamental position (1–4). (The pole is planted in front of the opposite foot at a distance of 18 or 20 inches, by stretching the lower and bending the upper arm.)

Repeat, swinging the right leg forward and springing off with the left foot to alight on both feet next the pole at "3 !" Stretch knees and resume grasp of pole with the *left* hand at "4 !"

[1] Outdoors, the "take off" and starting courses are marked; wooden cross-bars are placed on the uprights instead of the ropes of the ordinary jumping standards; the landing should be soft turf, free from pebbles.

Repeat, planting the pole in front of the right foot (from left to right)—1–4! (Continue left and right alternately in the direction forward.)

Repeat, with quarter facings toward the pole. (Pole replaced on the same side, the exercise is repeated three times until the starting-point has been regained.)

Jumping standards, ropes 18 inches high or higher.

Repeat exercises by ranks, raising ropes 3 inches with each repetition. (By entire class.)

Repeat, as distance jumps. (Move jumping standards forward, adding mats in front.)

Skill in vaulting acquired, heights and distances may be adjusted to allow maximum flights attainable by files, or graduated groups of pupils.

In the practice jumping—from 2 to 4 feet, to develop form—the poles are carried over the ropes during the act of landing and not thrown back as outdoors, where the higher cross-bars interfere.

If both ends of the poles are properly iron-banded, the vaulting of the preliminary practice may be executed left and right alternately, first on one end of the pole and then on the other, without change of grasp—both hands "undergrasping."

NOTE.—World's pole-vaulting records: indoors, 11 feet, 1¾ inches; outdoors, 11 feet, 10½ inches. Cook county high-school record, outdoors: 10 feet, 6½ inches.

PUTTING THE SHOT.

Leather shot-bags: round, or square granite stones; iron or lead balls. Pupils aligned as for pole-vaulting. Shot-bags, or stones, placed on the edge of the base line.

SELECT PRELIMINARY CLASS EXERCISES.

(Using bean-bags, dumb-bells. Execute left as well as right.)

Stoop forward from ordinary standing position to grasp the stone with both hands, resuming position with arms bent upward (stone held with both hands)—1! Stride position backward right, right knee bent and body slightly turned, and inclined backward, stone resting on the right hand (arm bent upward, left arm extended forward)—2! Stretch right knee, bending left, and push the stone forward with vigor, without overstepping the base line—3! Position—4!

The stone is "put" for distance and height, and both combined. The exercises can be repeated with walking and running starts; also in place, preceded by trunk-swinging (rotation), hopping on one foot, or on both feet alternately, with accompanying knee-bending, etc.[1]

[1] World's shot records: Outdoors, 12-pound shot, 55 feet, 2 inches; 16-pound shot, 47 feet. Indoors, 12-pound, 49 feet, 2 inches. Cook county high-school records: 12-pound, 44 feet, ¾ inch; 16-pound, 33 feet, 8½ inches.

FIRST GRADE.

ELSIE AMY WYGANT.

OUTLINE FOR MAY AND JUNE.

Science.—Trees: Identification, and weekly painted records of growth of willow, oak, maple, elm, ash, ash-leaf maple. Compare this year's growth of twigs of willow, oak, and elm. Notice bud coverings — scaly, naked, woolly, sticky; unfolding of buds; arrangement of buds on the twig. What do trees need? (light, heat, moisture). What provision is made for getting these necessities? Tree stories: "Philemon and Baucis," "The Poplar Tree," "A Fairy Story," from *Nature Myths and Stories*, by Flora J. Cooke.

History.—Making the furniture for the playhouse: This will require some knowledge of the woods used for furniture. Each child will be given one kind of wood to cut into longitudinal, cross, and quarter sections. Each one will polish the three sections. Then the group will compare these woods as to hardness, beauty of grain, adaptability to polish, etc. The children will take home samples in order to identify the woods used in furniture there. Each child will choose one kind to make into a piece of furniture for his playhouse. If a hard wood is chosen, the article to be made of it will have to be very simple, as, for example, an oblong block for a window seat. The most of the furniture will be made from quarter-inch poplar. Because of the limited time in the manual-training room, some pieces will be made of wire and raffia, others of cardboard.

Visits to a saw-mill, a chair factory, and Tobey's furniture house will be made to see furniture in various stages of completion.

Geography.—The garden will be the center of study. In its care, the life found will be noted and the best conditions possible made for the study of those forms which prove most interesting. Earthworms, ants, June bugs, and beetles are possible subjects of study. For the study of earthworms the following contrivance has been arranged: The earthworms will be put into a section of soil, 2 inches thick, 18 inches wide, and 22 inches high. This section of soil is inclosed in a frame, formed of two pieces of glass 18×22 inches, and two pieces of wood 22 inches long and 2 inches wide. The top will be covered with wire-netting and the whole placed in a pan partly filled with water. A black cloth will be kept over the pan except during times of observation. This keeps it dark, so that the earthworms work against the glass as if underground.

The ants will be kept in soil placed on a zinc-covered tray 11 inches square, which is surrounded by a zinc moat, filled with water. A glass is placed on top of the tray.

A trip will be made to a swamp to collect snails, crawfish, tadpoles, and typical plant life; we shall try to arrange the best possible conditions for

the observation of the life-habits of these animals. Also a trip to the lake-shore to collect typical material. Compare life in these three areas and note problem of adaptation of life to environment so far as interest of the children permits.

Number.—We shall make a reading book during May. This is to hold the reading slips used during the year. These slips are printed on paper $8\frac{1}{2} \times 5\frac{3}{4}$ inches. The book covers will be made of colored cardboard $6\frac{3}{8} \times 8\frac{3}{4}$ inches, and the edges bound in black *passe-partout* paper. The covers are fastened together with a strip of binding cloth $8\frac{3}{4} \times 1\frac{1}{2}$ inches. Stubs of tough gummed paper, $8\frac{3}{4} \times 1$ inch, will be bound into the book for the pasting of reading lessons as fast as they are used. One sheet, $8\frac{1}{2}$ inches long and $12\frac{3}{4}$ inches wide, is folded in half and placed under the stubs. This serves as end sheets to fold back as lining for the covers.

The linear measurements required in making this book cover all uses of the inch and the fractions of an inch taught during the year. Tests of the accuracy of the children's knowledge will thus be made, and drill will be given to clear any points which are indefinite.

During June this work will be in the hands of two members of the training class, who will give work to test the children's knowledge of other mathematical processes used during the year, and who will also give drill here when necessary. It is to be noted that these tests will be made by giving the children actual work and such as is worth doing, as in the case of linear measure in connection with the making of the book.

REVIEW FOR MARCH.

Geography.—The work on transportation planned for March and April is little more than started. So far we have followed the outline in the March number of the ELEMENTARY SCHOOL TEACHER, p. 532, first considering how the various commodities of the household are brought to our door in carts and wagons adapted to their various purposes. Our outlook was broadened by a visit to the Field Museum, which brought to the children's attention, not only a variety of primitive means of transportation, but also conveyances adapted to a great diversity of uses and to widely differing conditions.

The necessity of bringing many articles from beyond our immediate neighborhood centered the work upon railroads. Soon after Christmas one of the children asked to make a train of cars in the manual-training room. This request was enthusiastically seconded by several others. At the time the children were at work on another thing, and could not undertake any more, but now, in connection with transportation, the opportunity is given for making a train. Each car is to be 5×17 inches, the height varying with different kinds of cars. The wheels of the train are to be of lead, and made as nearly as possible by the usual process of casting. The actual work will be done by

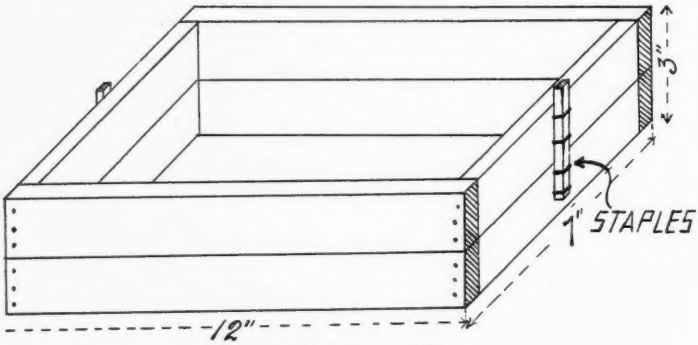
a member of the professional training class, Miss Helen Putnam, whose plan in detail is given below.

TEACHING PLAN FOR MOLDING CAR WHEELS.

1. Introduce subject of molding by showing imprints of objects in clay; then by making casts with plaster in imprints; finally by making mold and cast in plaster, using wooden pattern.

2. Visit car shops; notice shapes of wheels and methods of casting metal.

3. Plan pattern to be used, and write order to turner for number desired. Directions: Use wood ½ inch thick; make four side pieces 12 inches long and ½ inch wide; make four end-pieces 6 inches long and ½ inch wide,



WORKING DRAWING OF FLASK.

two for upper and two for lower part of flask; nail side pieces to end pieces with brads; drive two staples into each end of upper and lower parts of flask (see illustration); cut pegs to fit staples; put pegs through staples to hold the two parts of flask even.

4. Plan manner of casting, including making of flask and melting of metal.

5. Make flask.

6. Make mold, packing sand, dusting with flour, and making in holes.

7. Melt lead and pour.

8. Shake out and knock off risers.

Reading lessons.—HOW WE MOLDED OUR CAR WHEELS.

I.

We had wooden patterns of wheels.
We had wooden flasks.
The flasks were in two parts.

We had molding sand and white sand.
The molding sand was moist.
The white sand was dry.

II.

We packed molding sand into the lower part of the flasks.
We pushed the patterns into the sand.
We pushed them in up to the rim.
We smoothed off the molding sand and dusted it with white sand.

III.

We put on the upper part of the flask.
We made it fast with pegs.
We packed molding sand into the upper part.
We smoothed the sand off.
We opened the flask and took out the pattern.
The pattern left a mold in the sand.

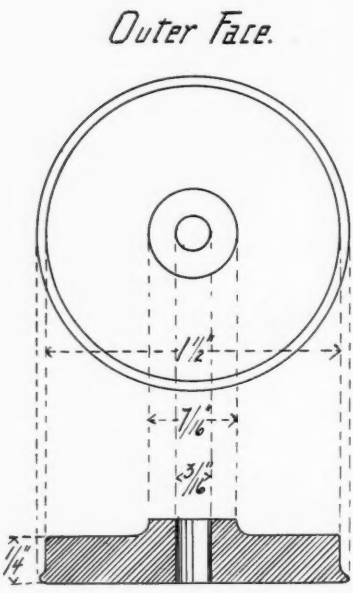
IV.

We dusted the mold with flour.
The flour kept the mold from sticking.
We made a hole down through the sand.
This was to pour the lead through into the mold.
We made air holes with a hat pin.
Then we put the flask together and made it fast with the pegs.

V.

We melted the lead.
We poured the melted lead into the mold.
We let it cool.

When it was partly cool we shook out the flask.
We knocked the risers off the wheels.
The wheels were done.



WORKING DRAWING OF CAR WHEEL.

Writing lesson: Order to pattern-maker for eight turned patterns.

"Please send me eight patterns made like this."

(Inclose working drawing with measurements indicated.)

Number work in making car wheels: Count wheels on car; measure diameter of them; given scale of model of car, find diameter of small wheels; draw plan of wheels at given scale, for pattern-maker; find size of flask needed for molding eight wheels at once; make flask according to measurements; weigh lump of lead; calculate approximately amount to be melted for eight wheels.

History.—Following the dominant interest of the children, the method of work in making floor coverings has been somewhat altered. According to the plan in the March number each child was to shear the wool from a part of a sheepskin and spin, dye, and weave the wool into a rug.

In analyzing the process with the children, in order to have them see the necessary steps in the making of a rug, attention was first directed to the weaving. It was expected that thus they could more easily trace back the process. Most of the children had had some experience with weaving in the kindergarten, and so great was their desire to begin at once the actual weaving that it seemed somewhat forced to insist upon the process of the preparation of the wool at this time. Therefore we started immediately to weave matting for the bedroom of the playhouse. On our looms we strung the warp of cotton twine and upon this wove raffia as a filling. As soon as this was well started, the children continued the weaving independently, and the work on the woolen rug has been resumed. A review of this work will appear in June.

Science.—Because the work on food was not completed in February, the study of grains as food was carried into March.

We examined several breakfast foods to discover how and of what they are made. We found that in every case some change had been made in the grain after it was harvested. The method of raising, gathering, and threshing the grain was discussed and illustrated with large blackboard pictures and in sand pans. We made several attempts to see the milling done, but were prevented. We tried to grind some corn on stones and some in an Indian stone mill. We hoped to make corn meal fine enough to use for cooking. But we compared that which we had ground with some ground in a modern mill, and decided to use the commercial article.

Home economics.—We used the corn meal to make southern "hoe cake." The quantity of material used in the following recipe makes enough for two layer cake tins spread vey thin.

HOE CAKE.

1 cup corn meal.
1 teaspoonful of sugar.
1 saltspoonful of salt.
Butter the size of an egg.
1½ cups of boiling water.

During one of our cooking lessons we made ice cream. This proved very successful, because the recipe was simple enough to be easily held in mind, the entire process within the independent grasp of each child, and the result eminently satisfactory. Each child made enough either of chocolate or vanilla ice cream for himself and one other.

ICE CREAM.

1 cup of cream.
¼ cup of sugar.
½ tablespoonful of chocolate, or ½ teaspoonful of vanilla.
Beat until the mixture is foamy.
We put the mixture into small tin pails.
We put the tin pails into large bowls of salt and ice.
We used three times as much ice as salt.

We opened the pails occasionally to mix the frozen and the unfrozen cream.

The freezing occupied about fifteen minutes.

SECOND GRADE.

CLARA ISABEL MITCHELL.

OUTLINE FOR MAY AND JUNE.

THE basis of all the work in second grade for May and June is (1) social occupations, (2) field excursions, (3) games and entertainments.

1. *Occupations.*—(*a*) Gardening, (*b*) wood-working, (*c*) clay-modeling, (*d*) weaving.

(*a*) Gardening: Planting of pop-corn for winter use; lettuce, radishes, onions, and parsley for luncheons; all these in the garden spot allotted to the second grade. In the flower beds will be planted sweet alyssum, phlox, corn-flower, salvia, callendulum, and castor-bean; sunflowers, geranium, moon-vines, wild cucumber, and gourds will be planted for the arbor.

(*b*) Wood-working: Cup-racks to be given to the different classes of the school for hanging individual cups. Poplar boards of various sizes and proportions, finished with molding, stained, and with brass hooks for the cups.

(*c*) Clay-modeling: Tiles 5×5 inches, to be used as decorations for window-boxes in the new school. The budding twigs, spring flowers, and germinating plants studied and modeled as subjects for the tiles.

(*d*) Weaving: May baskets of jute cord, wound and sewed with raffia; book-bags of seine twine.

2. *Field excursions.*—Visits to parks, the swamp at Seventy-ninth street, the lakeshore, the woods at Beverly Hills, and, if possible, the sand dunes.

3. *Games and entertainments.*—Class drills and games in the gymnasium and out-of-doors; daily exercise in rhythmic step to musical accompaniment; preparation of two twenty-minute programs for the meeting of the entire school at the morning exercise; preparation of a part of the program for a spring festival.

Correlated with the activities that are the basis of the two months' work will be:

1. *Nature study.*—Observation and records of germination and growth of garden plants; similar records in writing, clay-modeling, painting, or drawing of changes in pond-life; familiar plants of the prairies; budding and blossoming of the trees; birds and insects as they appear in their seasons; changes in color of landscape and corresponding changes in temperature.

2. *History.*—The cliff dwellers and pueblo builders as agricultural types; building of miniature dwellings from models at the Field Museum; stories of inventions in means of transportation.

3. *Literature.*—Stories of birds, flowers, insects — all creatures — made newly interesting by the return of the spring and summer seasons; myths; fairy tales; poems of the season; dramatization of "The Sleeping Beauty" for the spring festival.

4. *Geography.*—Excursions to markets to see garden and farm produce brought into our city; means of transportation. Lakes, rivers, canals, railroads as routes of transportation. Camels, donkeys, ox wagons, steam engines and boats. Excursion to Field Museum to see transportation exhibit.

5. *Number.*—Finding area of boards used for the cup-racks. Square inch and square foot. Actual and comparative growth of plants and twigs. Arithmetical statement of the ratios found. Special emphasis on partition. Continuation of practice in addition and subtraction. Short, quick drills. Writing in the number books of tables as they are needed.

THIRD GRADE.

GUDRUN THORNE-THOMSEN.

OUTLINE FOR MAY AND JUNE.

WITH the first signs of spring, when things are happening out-of-doors, the children demand a life away from the schoolroom; and it becomes a necessity to do work very different from that of the winter months. Ideally, the school should then be only a convenient place to discuss the experience of the outdoor life. As far as is possible, the children will go on excursions every week; and the school garden will afford an excellent opportunity for a great deal of healthful work.

The third grade chose to plant potatoes. In order to supply the school with this vegetable next winter, it was decided that the pupils plant the greater part of their vegetable garden in potatoes, that is, 216 square feet, the remainder, 108 square feet, to be planted in radishes and lettuce for our lunches this spring. Besides the potatoes, lettuce, and radishes, the third grade sowed and has in charge 400 square feet of wheat, the year's study of agriculture demanding this experience, the children also realizing that the next class would need the wheat to work with, the coming fall. In the flower bed will be planted castor beans, calladium, salvia, cornflowers, phlox, and sweet alyssum.

Gardening.—Raking, marking of rows, digging trenches for potatoes,

cutting and planting potatoes; watering the garden when necessary, weeding, freeing the plants from injurious animal life; making a record of the amount and price of potatoes and wheat planted and sowed, so that the children may realize the yield next fall.

Experiments: Grow potatoes in different soils, in very clayey and very sandy soil, and in loam; also plant some very deep and some near the surface in our garden soil; compare results with the growth in our garden. The study of germination will be continued; the germination from seeds (radishes and lettuce), compared with that from underground stems (potato) and bulbs (tulip, crocus).

During March and April the children kept a record of the birds which they had seen, but they made no study of them. The following points will be considered: the interrelation of bird, insect, and plant life; the structure of birds — bill, feet, wings, shape of body, as adapted to particular functions. Painting, drawing, and modeling are the chief aids to observation in this study. The children will have an opportunity to verify their observations, and to find out what they have no means to observe by using the books in the library bearing on the above subjects.

Geography.— The Nile valley as a type of an agricultural country under conditions differing widely from ours. The source of the river, rainfall; the Abyssinian mountains; the work of the river, carrying and deposition of silt, overflow of river; the desert, irrigation. Means of study: (*a*) excursions to see work of rain, beginning of a river (south shore); the ravines (Glencoe); (*b*) pictures; (*c*) modeling in sand; blackboard drawing; (*d*) adapted reading on the subject.

Literature.— Stories of Joseph and his brethren in the land of the Pharaohs; *Ulysses* continued; spring poems,

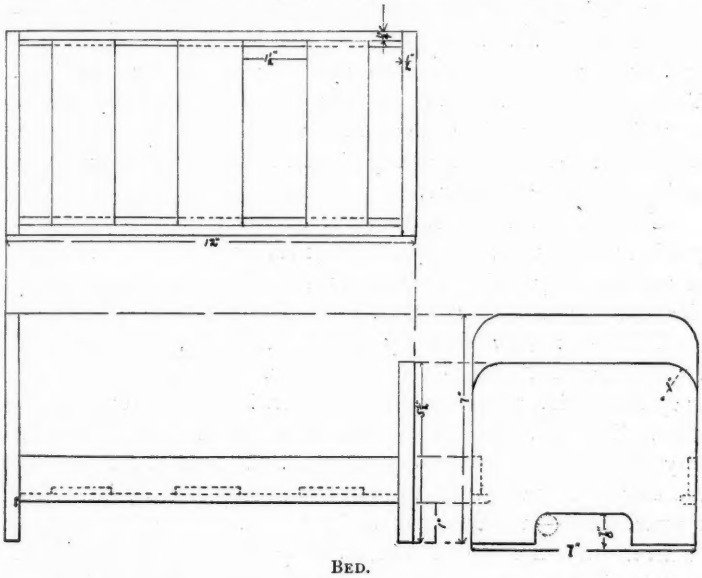
History.— The children have completed the farm buildings (of cardboard), have stocked the farm (with animals of clay). They have to some degree realized the farmer's work as he plows his fields and sows the seed. Our imaginary farmer (see ELEMENTARY SCHOOL TEACHER, Vol. II, No. 6, p. 458) has raised more wheat, corn, and potatoes than he needs; so have other farmers who have settled around him; and a market for their produce is an imperative necessity. The beginning of a town will be the subject of study: where situated, stores, grain elevators, railroads, etc. Means of study: Visit to South Water street to see the truck farmers' products, the commission-house men buying, etc. Maps of the United States for the study of location of towns and cities. Why is Chicago where it is?

Mathematics.— The history work demands a close study of interchange of commodities. It will be necessary to ascertain the prices of farm products; cost of transportation; market value; value of labor; the account books to be balanced for the year.

Cooking.— The gardening will take the place of the regular cooking lessons; the preparation of lunches to be continued by groups from the

grade, lemonade, ices, salads taking the place of cocoa and soups. As a test of the work of the year the grade will cook maccaroni without directions of any kind.

Manual training (Elizabeth Euphrosyne Langley).— The children have decided to make each a boat, a game, and a bed. The bed is of poplar, the head and foot boards one-half inch thick, the side pieces and slats one-fourth inch. The construction is simple, as may be seen from the illustration. For



BED.

the head board a seven-inch square is made. A small coping saw is used to take off the corners and make the top round. The curved opening at the bottom of the head and foot boards is made with an inch auger bit after the space has been accurately marked off, and is then sawed out with the coping saw. The children should saw as near to the line as possible and depend upon this small saw, rather than the file, to make the edges smooth. They can saw with more skill if the wood is clamped to the bench instead of being held in the vise. The side pieces are sawed and planed to fit, and then nailed together before being nailed to the foot and head. For illustration of the game see COURSE OF STUDY, Vol. I, p. 816.

Music.— The third and fourth grades have formed a glee club and will sing: "Spring Song," by Maude Valérie White; "The Swallows," by Clifton Bingham; "The Rain," by Eleanor Smith; "The Swing," by Nevin; Book II, *Modern Music Series;* "Twickenham Ferry," "Old English," etc.

FOURTH GRADE.

GERTRUDE VAN HOESEN.

READING.

IN the fourth grade the children who have learned to read under the impulse of acquiring the knowledge necessary to reinforce their activities, and whose reading has always been imaging, have mastered unconsciously the mechanics of reading. The only problem, then, is to procure the literature by means of which they can help themselves to acquire that knowledge which is not a substitute for experience, but an aid in interpreting and expanding experience.

Under the idea of correlation, do the pupils in the fourth grade read enough? is a question oft repeated. I shall attempt to answer it by giving an account of some work done during the winter months on "Prehension of Food."

This work grew naturally out of our study, in October, of swamp animals, and out of our study, in November, of the preparation that animals make for winter, including clothing and food. The children made a careful observation of their own way of eating and of the organs used. They noted especially the adaptability of organ to function, as hand, arm, joints; lips, tongue, teeth—number, kind, and function. In feeding the two squirrels that are in the school, they carefully watched and compared them, in respect to their mode of eating, with the human being. To see how other animals feed, we visited the zoo at Lincoln Park. Each child chose an animal, about which he reported to the class upon the following points: (1) Home of the animal. (2) Food; how obtained? (3) What are the prehensile organs? how used?

As a mode of study the children modeled in clay the animals chosen in the act of catching their prey. Often they were driven to the study in the Field Museum of stuffed specimens and skeletons of their respective animals and of others of the same family.

Of the reading list that follows no one child read all the

books and articles, but many of them were read by all the children:

READING LIST: "Monkeys in North America," *St. Nicholas*, Vol. XXI, p. 333; "Apes and Monkeys," *First Book of Nature;* Abbott, "Monkeys," *Cyclopedia of Natural History;* "A New Monkey," *St. Nicholas*, Vol. XXI; "Ape," "Monkeys," *Young Folks' Encyclopedia*; Johonnot, "Mannoset," "Story of a Wild Baby," "A Long-Nosed Monkey," "Mice," "Rabbits," "The Woodchuck," *Friends in Feathers and Fur;* Johonnot, *Neighbors with Claws and Hoofs; Flyers, Creepers, and Swimmers;* Mrs. Kelly, "Winter Friends" (birds), " "Snow Tracks" (animals), *Short Stories of Our Shy Neighbors;* "Carnivorous Animals," *First Book of Nature*, chap. v; Tenney, "Dogs, Wolves, and Foxes," "Beavers and Raccoons," "Cats," *Natural History of Animals;* Beard, "Beaver," "The White Bear," "The Seal," *Curious Homes and Their Tenants;* Wright, "The Beaver's Story," *Four-Footed Americans;* "The Beaver," *St. Nicholos*, Vol. XX, p. 608; "Bears of North America," *ibid.*, Vol. XXI; "The Rabbit," *Murche's Science Reader*, Book I, p. 84, Book II, p. 91; Burroughs, "Chipmunks and Mice," *Squirrels and Other Fur-Bearers;* "Wild-Mice, Rats, and Gophers," *St. Nicholas*, Vol. XII, p. 498; "Feet of Different Animals," *ibid.*, Vol. XII, pp. 551 and 792; "Quadrupeds of North America," *ibid.*, XXI, p. 231; Vol. XXIII, p. 424; "Some Man-Eaters," *ibid.*, Vol. VII, p. 956; "A Village of Wild Beasts," *ibid.*, Vol. IV, p. 651; "The Foxes of North America," *ibid.*, Vol. XXIV, p. 487; "A Talk about a Lion," *ibid.*, Vol. IV, p. 416; "Lion-Killer," *ibid.*, Vol. V, p. 78; "The True Story of a Little Gray Rabbit," *ibid.*, Vol. XVII, p. 753; "Prairie Squirrels," *ibid.*, Vol. VII, p. 290; "Squirrels, Mannosets, and Servellel," *ibid.*, Vol. XXII, p. 601; "The Buffalo, Musk-Ox, Mountain Sheep, and Mountain Goat," *ibid.*, Vol. XXI, p. 674; "White Squirrels," *ibid.*, Vol. XII, p. 793; "Elephant," *ibid.*, Vol. XXIX, p. 838.

The children were encouraged to make notes on their reading. Some of these are here printed.

THE TIGER.

His home is in the thick, high grasses which grow in lonely woods. He eats deer, wild pigs and monkeys and birds and other animals. He gets them by pouncing from his hiding place, and he kills them in a moment.—*Walton Parker.*

THE LION.

The lion lives in the jungle. He eats deer, wild pigs, and even tigers, elephants, and men, if he can find and kill them. He hides in the underbrush of the forest, and pounces on them as they pass. He catches them by the throat with his teeth, and kills them in an instant.—*Dorothy Llewellyn.*

The lion lives in the deep forests. He eats deer, wild pigs, monkeys, birds, and other living things of the same kind when he can get them. He catches these animals by pouncing upon them, and kills them in a moment. But when he is driven by hunger he will seize men.—*Joseph Myers.*

The foregoing notes cover the two points as to the home and the food of the animals in question. In order to describe

FOURTH GRADE.

GERTRUDE VAN HOESEN.

READING.

IN the fourth grade the children who have learned to read under the impulse of acquiring the knowledge necessary to reinforce their activities, and whose reading has always been imaging, have mastered unconsciously the mechanics of reading. The only problem, then, is to procure the literature by means of which they can help themselves to acquire that knowledge which is not a substitute for experience, but an aid in interpreting and expanding experience.

Under the idea of correlation, do the pupils in the fourth grade read enough? is a question oft repeated. I shall attempt to answer it by giving an account of some work done during the winter months on "Prehension of Food."

This work grew naturally out of our study, in October, of swamp animals, and out of our study, in November, of the preparation that animals make for winter, including clothing and food. The children made a careful observation of their own way of eating and of the organs used. They noted especially the adaptability of organ to function, as hand, arm, joints; lips, tongue, teeth—number, kind, and function. In feeding the two squirrels that are in the school, they carefully watched and compared them, in respect to their mode of eating, with the human being. To see how other animals feed, we visited the zoo at Lincoln Park. Each child chose an animal, about which he reported to the class upon the following points: (1) Home of the animal. (2) Food; how obtained? (3) What are the prehensile organs? how used?

As a mode of study the children modeled in clay the animals chosen in the act of catching their prey. Often they were driven to the study in the Field Museum of stuffed specimens and skeletons of their respective animals and of others of the same family.

Of the reading list that follows no one child read all the

books and articles, but many of them were read by all the children:

READING LIST: "Monkeys in North America," *St. Nicholas*, Vol. XXI, p. 333; "Apes and Monkeys," *First Book of Nature;* Abbott, "Monkeys," *Cyclopedia of Natural History;* "A New Monkey," *St. Nicholas*, Vol. XXI; "Ape," "Monkeys," *Young Folks' Encyclopedia*; Johonnot, "Mannoset," "Story of a Wild Baby," "A Long-Nosed Monkey," "Mice," "Rabbits," "The Woodchuck," *Friends in Feathers and Fur;* Johonnot, *Neighbors with Claws and Hoofs; Flyers, Creepers, and Swimmers;* Mrs. Kelly, "Winter Friends" (birds)," "Snow Tracks" (animals), *Short Stories of Our Shy Neighbors;* "Carnivorous Animals," *First Book of Nature*, chap. v; Tenney, "Dogs, Wolves, and Foxes," "Beavers and Raccoons," "Cats," *Natural History of Animals;* Beard, "Beaver," "The White Bear," "The Seal," *Curious Homes and Their Tenants;* Wright, "The Beaver's Story," *Four-Footed Americans;* "The Beaver," *St. Nicholos*, Vol. XX, p. 608; "Bears of North America," *ibid.*, Vol. XXI; "The Rabbit," *Murche's Science Reader*, Book I, p. 84, Book II, p. 91; Burroughs, "Chipmunks and Mice," *Squirrels and Other Fur-Bearers;* "Wild-Mice, Rats, and Gophers," *St. Nicholas*, Vol. XII, p. 498; "Feet of Different Animals," *ibid.*, Vol. XII, pp. 551 and 792; "Quadrupeds of North America," *ibid.*, XXI, p. 231; Vol. XXIII, p. 424; "Some Man-Eaters," *ibid.*, Vol. VII, p. 956; "A Village of Wild Beasts," *ibid.*, Vol. IV, p. 651; "The Foxes of North America," *ibid.*, Vol. XXIV, p. 487; "A Talk about a Lion," *ibid.*, Vol. IV, p. 416; "Lion-Killer," *ibid.*, Vol. V, p. 78; "The True Story of a Little Gray Rabbit," *ibid.*, Vol. XVII, p. 753; "Prairie Squirrels," *ibid.*, Vol. VII, p. 290; "Squirrels, Mannosets, and Servellel," *ibid.*, Vol. XXII, p. 601; "The Buffalo, Musk-Ox, Mountain Sheep, and Mountain Goat," *ibid.*, Vol. XXI, p. 674; "White Squirrels," *ibid.*, Vol. XII, p. 793; "Elephant," *ibid.*, Vol. XXIX, p. 838.

The children were encouraged to make notes on their reading. Some of these are here printed.

THE TIGER.

His home is in the thick, high grasses which grow in lonely woods. He eats deer, wild pigs and monkeys and birds and other animals. He gets them by pouncing from his hiding place, and he kills them in a moment.—*Walton Parker.*

THE LION.

The lion lives in the jungle. He eats deer, wild pigs, and even tigers, elephants, and men, if he can find and kill them. He hides in the underbrush of the forest, and pounces on them as they pass. He catches them by the throat with his teeth, and kills them in an instant.—*Dorothy Llewellyn.*

The lion lives in the deep forests. He eats deer, wild pigs, monkeys, birds, and other living things of the same kind when he can get them. He catches these animals by pouncing upon them, and kills them in a moment. But when he is driven by hunger he will seize men.—*Joseph Myers.*

The foregoing notes cover the two points as to the home and the food of the animals in question. In order to describe

their prehensile organs, the children continued to read and to reinforce their reading by visits to the museum.

In addition to the above reading list there was another list, which consisted of stories about animals. Prominent among the books containing them were *The Jungle Book*, by Rudyard Kipling, and *Wild Animals That I Have Known*, by Ernest Seton-Thompson. Many of the stories on this list are found in the different volumes of *St. Nicholas*.

During the winter quarter the children also observed and studied the birds which stay with us during the winter. Below are some of the records made by the children.

THE SHRIKE.

He lives here in the winter. He eats mice, birds, etc. After he catches his prey, to kill them he sticks them on a thorn. Sometimes he just leaves them there and goes off to get something more and never eats them and lets them die there. He builds in the branches of trees.— *Harriet Mason.*

RED-TAILED HAWK.

He lives here in the winter. He eats mice and birds. He gets his food by pouncing on them. His nest is built in deep woods and in tall trees. He has long, sharp claws and a strong, curved bill.— *Marjorie Armstrong.*

SCREECH-OWL.

He lives here in the winter. He eats birds and mice. He catches them at night at their feeding places. When the mice come out to feed he pounces upon them. The owl finds a hollow tree and digs the earth away a little and makes his nest of sticks and a lining of such hair and feathers as he can find.— *Dorothy Llewellyn.*

The notes that have been given are by no means complete. They show, however, the beginning of independent reading in the library. The reading outlined the children did in connection with one phase of nature study. They were studying, at the same time, in connection with Chicago as a community, food, its source, and how it is transported. Their reading included also *The Pied Piper of Hamelin* and *The Story of Siegfried.* The latter, typifying heroism, is continued through the year.

The activities of the child are such that he must go to books to interpret his experiences. The problem before the teacher, then, is not only to provide him with the reading matter that

shall give him the knowledge he is seeking, but also to give him that reading matter which shall send him back to the experiences for the interpretation of which he went to read.

OUTLINE FOR MAY AND JUNE (FRENCH).

LORLEY A. ASHLÉMAN.

LE PALAIS DE VERSAILLES.

(Continued from April.)[1]

Jean. Grand-père, veux-tu bien nous faire voir encore une fois la salle de l'opéra?

Le grand-père. Tout à l'heure, Jean. (Il s'adresse à François, qui arrange les fauteuils et les chaises.) Veuillez mettre quelques bûches dans la cheminée?

François. Oui, monsieur. Voilà, c'est fait!

Le grand-père. Merci! Maintenant, baissez la lumière, s'il vous plaît.

(François baisse la lumière.)

Voilà la salle de l'opéra. Cette salle, construite sous le règne de Louis XV, ne fut inaugurée qu'à l'arrivée de la dauphine. (Soupirant.) La salle de l'opéra a beaucoup changé depuis les triomphes et les malheurs de Marie Antoinette. La chambre du sénat qu'on a établi à Paris y a eu ses séances. Voici la salle qui sert toujours aux réunions du congrès, c'est-à-dire à la chambre des députés et du sénat réunis. C'est dans la chambre des députés qu'on a élu les derniers présidents de notre république.

Maintenant, nous allons suivre l'itinéraire du dauphin et de la dauphine le jour de leur mariage. Nous passerons premièrement dans les grands appartements du roi, ensuite nous verrons les petits appartements de la reine.

Fanchette. Oh, que cette salle est belle! Qu'est-ce qu'on y faisait?

La grand'mère. On y dansait, ma petite. C'était la salle de bal. Pourtant, la reine n'y donnait pas souvent ses bals. Elle

[1] Through error the first part of this reading lesson was printed under the sixth grade.

avait fait construire une autre salle en bas. Le plafond de cette pièce représente l'Apothéose d'Hercule, dont il faut conclure qu'elle s'appelle . . . .

Julien (l'interrompant). Le salon d'Hercule!

La grand'mère. En effet, c'est le salon d'Hercule!

Le grand-père. Les cinq salons qui suivent portent le nom de la divinité qui orne le plafond. Voici le salon de Vénus. On le réservait aux collations.

Estelle (vivement). Celui-ci doit être le salon de Diane, car je la vois au plafond.

Le grand-père. Oui, tu as raison. Il servait de chambre de billard.

Jean. Pourquoi est-ce que le plafond de cette salle est si rouge?

Julien (se tournant vers Jean). Mais, voilà Mars; ne le vois-tu pas?

Le grand-père. Fort bien, Julien! Donc je n'ai pas besoin de vous dire le nom de ce salon. (Se tournant vers Marguérite.) Quel peut être le nom de celui-ci, Marguérite?

Marguérite (lentement). Je vois quelqu'un assis sur un char, traîné par deux coqs. Il a des ailes sur la tête et il tient à la main une espèce de baquette, entourée de deux serpents entrelacés.

La grand-mère. Les ailes, que peuvent-elles désigner?

Marguérite. Peut-être la vitesse, grand'mère.

La grand'mère. Et les serpents?

Louis (vivement). Quelque chose de mauvais, j'en suis sûr!

La grand'mère. Dites-moi, mes enfants, si vous le pouvez, qui était le messager des dieux?

Marguérite (avec chaleur). Ah! j'en sais le nom maintenant; c'est le salon de Mercure, n'est-ce pas?

Le grand-père. Bravo! Au temps de Louis XIV, ce salon servait de chambre de parade. Un lit somptueux s'y trouvait. La balustrade d'argent qui l'entourait valait plusieurs centaines milliers de francs.

Voilà, la salle du trône. On peut encore y voir les trois crochets qui soutenaient le dais, attaché au mur.

Fanchette (regardant attentivement le plafond). Grand-père, veux-tu me dire le nom de ce dieu? Est-ce le dieu du soleil?

Julien. N'est-ce pas Apollon, grand-père?

Le grand-père. Oui, c'est Apollon. Nous arrivons maintenant au salon de la guerre. D'ici l'on peut voir à travers la grande galerie des glaces, jusqu'au salon de musique et des jeux de la reine, appelé salon de la paix. (S'adressant à la gouvernante.) Dans ces trois pièces les plus grandes fêtes avaient lieu, n'est-ce pas, mademoiselle?

La gouvernante. Oui, monsieur. Pour une grande cérémonie, quand on voulait réunir le salon de la paix aux autres pièces, on enlevait le grand châssis qui fermait l'arcade. Cette arcade faisait communiquer le salon de la paix avec la galerie des glaces. Imaginons le châssis dans l'arcade! (Riant.) Nous voilà seuls chez Marie Antoinette. (Lentement et comme dans un rêve.) Je la vois assise à une table ronde. Avec quelle vivacité elle s'intéresse à ceux qui prennent part aux jeux! Elle a toujours le mot à propos qui charme et qui attire. (Changeant brusquement de ton.) Mais la jalousie des cœurs corrompus dont un trône est toujours plus ou moins entouré lui crée des ennemis. Elle n'a pas même l'amour de la famille royale!

Jean. Pourtant, mademoiselle, je me souviens d'avoir lu que la sœur de Louis XVI l'aimait beaucoup.

La grand'mère. Grand-père, fais nous voir Madame Élizabeth. On ne peut jamais trop admirer le caractère noble et la grandeur d'âme de cette belle-sœur, qui a tant fait pour adoucir les souffrances d'un frère et d'une reine!

Malheureusement, Madame Élizabeth était plus jeune que Marie Antoinette; elle n'a pu venir à son aide que vers la fin de son règne.

Le grand-père. Voici le comte d'Artois, plus tard Charles X. Ce beau-frère l'aimait à sa manière, mais il n'avait d'autre but dans la vie que la recherche du plaisir. Il y entraînait la reine, qui n'était que trop portée à s'amuser.

Voici un autre beau-frère, le comte de Provence, que vous connaissez sous le nom de Louis XVIII. Le comte de Provence espérait devenir roi lui-même; il avait l'appui secret de ceux qui s'opposaient à la reine.

Fanchette (soupirant). Elle avait au moins l'amour du roi. Lui, l'aimait avec tendresse.

La gouvernante. Un peu trop, peut-être. Car il ne pouvait voir ses défauts. J'ai toujours admiré Louis XVI. Il a commis beaucoup de fautes, toujours sans le vouloir, par ignorance, sous l'influence de la reine, qui s'opposait souvent aux réformes que le roi voulait introduire.

Le grand-père. Mademoiselle, que vos explications viennent à propos. C'est à Marie Antoinette qu'on reproche le renvoi de ces trois ministres réformateurs: Malesherbes, Turgot et Necker. Les ministres courtisans qui remplacèrent Malesherbes, Turgot et Necker fournissaient l'argent pour les extravagances de Marie Antoinette. Ainsi, peu à peu elle s'aliéna l'amour du peuple, qui changea en une haine sourde et féroce. Elle subissait aussi l'influence de sa mère, Marie Thérèse, qui, avisée dans la politique, se servait de sa fille comme d'un instrument utile à l'Autriche. Elle oubliait que la reine ne devait avoir d'autre intérêt que celui de la France. Le peuple, en apprenant tous ces faits, les exagérait et bientôt on appela la reine, l'Autrichienne.

Passons maintenant dans la chambre à coucher de Marie Antoinette. Il y a tant de souvenirs qui s'y rattachent.

Estelle. La chambre à coucher est magnifique, mais n'est-elle pas un peu morne?

La gouvernante. La reine la trouvait froide et préférait de beaucoup sa chambre au Petit Trianon.

La grand'mère. Il ne faut pourtant pas perdre de vue que la chambre a beaucoup changé. Si les meubles de la reine y étaient, je suis sûre que nous la trouverions plus gaie. Autrefois, tous ces murs étaient tendus de tapisseries des Gobelins. Il y avait trois glaces, où aujourd'hui vous n'en voyez qu'une. Au dessus de la porte, dissimulé dans le mur, est le portrait de Marie Antoinette.

Le grand-père. Que voici!

La grand'mère (reprenant). Ce portrait est peint par Madame Lebrun. Ah! la voilà, Madame Lebrun! Elle a fait presque tous les portraits de la reine.

Marguérite. Combien d'enfants avait Marie Antoinette, grand'maman?

La grand'mère. Elle en avait quatre. Ils sont tous nés dans la chambre que nous venons de voir. Elle avait deux fils et deux filles. La fille cadette est morte dans sa première année. Peu de temps après son fils aîné a montré des symptômes alarmants, et il est mort à l'âge de huit ans. Il avait toujours été d'une santé délicate, préférant l'étude et la lecture aux jeux. Louis XVI, qui avait été un enfant maladif, avec l'âge devint fort robuste. On espérait le même sort pour le dauphin. Ce pauvre prince, d'un caractère noble, aurait fait sans doute un grand homme. On raconte qu'à l'âge de sept ans un de ses jeunes compagnons brisa un objet appartenant à la reine. Après son départ, on trouva l'objet et l'on accusa le dauphin de l'avoir cassé. Il ne s'en défendit pas, et subit une punition assez sévère. Quelques jours plus tard le petit compagnon revint voir le prince. Il avoua sa faute. On demanda au dauphin pourquoi il n'avait rien dit. "Mais, je ne pouvez pas accuser mon compagnon," répondit-il.

Marguérite. Est-ce lui qui est mort dans la tour du temple et qui est connu sous le nom de Louis XVII ?

La gouvernante. Non, c'était son frère. Le dauphin est mort quelques mois avant la Révolution.

Estelle. Qu'est-il arrivé à la fille aînée de Marie Antoinette ?

Le grand-père. Voici Madame Royale. C'est ainsi qu'on l'appelait. Pendant deux ans et demi on l'enferma dans le temple. Puis finalement on l'envoya à son cousin, l'empereur d'Autriche. Elle se maria avec le fils aîné de Charles X et devint la duchesse d'Angoulême. Par la petite porte au dessous du portrait de Marie Antoinette nous pouvons passer dans le boudoir de la reine. N'est-ce pas que les boiseries en sont belles ?

Fanchette. Voilà les bibliothèques de Marie Antoinette, j'en suis sûre. Quelle quantité de livres !

La grand'mère. Ce ne sont que les dos de livres. Tous les livres qui appartenaient à la reine furent détruits pendant la Révolution.

Jean. Lisait-elle beaucoup ?

La gouvernante. Non, très peu. Elle chargea son secrétaire

de recueillir les livres pour sa bibliothèque. Il les choisit avec très peu de discrétion. Beaucoup de ces livres firent tort à la réputation de la reine.

Le grand-père. Ne trouvez-vous pas, mes enfants, que ce cabinet est la plus belle pièce? On prétend que si l'on se met dans un certain angle et qu'on se regarde dans l'angle de ces deux mirroirs on voit tout le corps, sauf la tête.

Julien. Que c'est étrange!

Le grand-père. Dans ce cabinet la reine recevait ses amis intimes, et c'est ici que ses musiciens préférés jouaient pour elle, entr'autres Gluck et Gretry. C'est elle qui fit venir Gluck à Paris. Marie Antoinette aimait passionnément le théâtre et l'opéra. Malheureusement, elle se retirait trop dans ses cabinets. Elle ne s'inquiétait pas assez des hauts personnages de la cour. Ce qui lui faisait bien des ennemis. Nous allons maintenant voir l'escalier de la reine.

La grand'mère. Cet escalier me fait toujours frissonner!

Fanchette. Pourquoi, grand'maman?

La grand'mère. Parceque, mon enfant, il me fait toujours songer au 6 octobre 1792. La foule furieuse qui était partie de Paris la veille, pénétra dans le palais de Versailles à cinq heures et demie du matin, et parvint à la chambre de Marie Antoinette par cet escalier.

Jean. Que faisaient les gardes pendant tout ce temps?

La gouvernante. Le roi leur avait défendu de se servir de leurs armes. La reine, heureusement, s'était enfuie chez le roi avant l'arrivée de la foule. La famille royale resta presque toute la journée dans l'appartement du roi. Marie Antoinette céda finalement aux demandes menaçantes de la foule. Elle se présenta au balcon, son enfant dans les bras. Au bout de quelques instants le roi prit place à côté d'elle. C'est alors qu'il promit que dorénavant la famille royale habiterait les Tuileries à Paris.

Le grand-père. Oui, avec cette promesse finit l'histoire de Versailles. Depuis cet évènement les rois de France n'ont plus habité le palais de Versailles, et en 1837 on en a fait un musée. (Souriant.) Eh bien, nous irons visiter les Trianons une autre

fois, car à mon avis c'est au Petit Trianon que Marie Antoinette a passé les journées les plus heureuses de sa vie. Je vais vous la montrer déguiser en paysannes dans son petit hameau.

(On entend sonner onze heures.)

La grand'mère. Mais, mais! Ce sera pour une autre fois, grand-père. Fais vite allumer le gaz! Onze heures, et nos enfants qui ne sont pas au lit!

FIFTH GRADE.

REVIEW FOR FEBRUARY AND MARCH.

HARRIET T. B. ATWOOD.

Geography. — Hudson river valley: In beginning the study of the Hudson river valley the children performed an experiment in the sink to see the effect of submergence of the land upon the lower courses of rivers. In a quantity of sand, placed in one end of a sink, two of the children modeled several ravines, similar to those they had seen in nature. As they worked, the rest of the children noted and discussed the shape and size of the ravines at various points, and decided where the streams must have been located. Water to the depth of about one-half inch was let into the part of the sink not covered with sand, to represent the ocean into which the streams flowed. Then, by means of a hose, water was added until a depth of about four inches was reached, thus submerging a portion of the coast and drowning the lower portions of the valleys.

Drawings were made on the blackboard representing the ravines before and after the drowning took place. In the discussion that followed, the children considered the influence which submergence of the land would have on the valleys they had seen, and on certain valleys shown in pictures about the room. Maps and pictures of typical submerged coasts were examined. Many pictures of the Hudson were shown to the class.

After the study of the lower portions of the Hudson valley we examined the area drained by that river and its tributaries, modeling in sand the Hudson river basin and surrounding land. The historic importance of the Hudson valley as a gateway or pass to the lands of the north and west of the mountains was one of the points emphasized in the lesson.

History. — The New York colony: We began the study of New York by taking an imaginary trip to that colony from Virginia. A large colored picture, drawn by a member of the pedagogic class, representing a typical street in old New York, and several smaller pictures which showed details in architecture, the dress and customs of the people, etc., were used to give the children an idea of the life of the Dutch colony. Selections from several

books[1] were assigned to the different children, and each child was asked to report to the class all the new points which he found in the books regarding the life of old New York.

As the differences between this colony and the English colonies previously studied became apparent, the children were very much interested in finding out more about the Dutch people who had founded New Amsterdam. They read of Henry Hudson's voyages, and of the settlement of Fort Orange, Fort Nassau, and New Amsterdam. They are also reading about the Dutch people in their native land, and comparing the customs of the Dutch of Holland with the customs of the Dutch of old New York.

For oral reading the children have begun Irving's *Rip Van Winkle.*

Cooking.— Cereals: In beginning the study the children cooked for their luncheons some of the common breakfast cereals, as rolled oats, Pettijohn's crushed wheat, cream of wheat, malted breakfast food. They noticed that the latter two required much more water than the first two. The difference was seen to be, not in the grain, but in fineness, there being more material in one-half cup of the fine grain than in the same amount of coarse.

To answer the question why it is necessary to boil the cereals, the presence of starch was shown by testing with iodine, and the children performed some experiments to see the effect of different temperatures upon starch. The directions given for these experiments were as follows: "Mix half a teaspoonful of cornstarch with half a tumbler of water, and let it stand. Mix the same amount of cornstarch and water in a beaker, and heat to 140° F., and let stand a few hours. Use the same amounts of cornstarch and water, and boil. Examine a portion of each under the microscope."

The children next made some crude corn cake, crushing their own corn in stone mortars, mixing the coarse meal thus obtained with water, and baking the mixture. They were asked to find out how corn bread is made in their own homes, and afterward they made some corn cake for luncheon, using flour, egg, and baking powder in addition to corn meal. They also made flour muffins.

The next work undertaken was the making of baking-powder biscuits. After watching the cooking teacher make biscuit, the children wrote out their own recipes for the same, and in the following lesson made biscuit for luncheon. After making the biscuit they discussed the question of the difference between the corn bread made from the corn of their own crushing and the later corn and wheat muffins and biscuit. They decided that fineness and lightness were the advantages of the latter, but they had no very accurate notions as to how the lightness had been brought about.

[1] ALICE MORSE EARLE, *Colonial Days in Old New York*, and *Home Life in Colonial Days;* HIGGINSON, *Young Folks' History of United States;* EGGLESTON, *A First Book in American History;* WRIGHT, *Children's Stories in American History.* See also references in March issue of ELEMENTARY SCHOOL TEACHER, p. 553.

The class made a trip to a large flour mill at about this time to see the milling processes — grinding, etc.

In order to see why using baking powder made the dough light, the children performed the following experiments:

Experiment 1: (*a*) Taste cream of tartar; (*b*) dissolve a little cream of tartar in water and put a drop of the solution on blue litmus paper; (*c*) put a drop of vinegar on litmus paper; (*d*) try lemon juice in the same way; (*e*) try hydrochloric acid.

Experiment 2: (*a*) Taste baking soda; (*b*) dissolve some in water and put a drop upon red litmus paper; compare with cream of tartar.

Experiment 3: (*a*) Add water to soda; (*b*) add some acid (as vinegar) to soda; (*c*) add acid to marble and compare with (*b*); (*d*) add a solution of cream of tartar to soda; (*e*) add water to baking powder; (*f*) taste baking powder and test it with litmus. Why are soda and cream of tartar the two chief ingredients of baking powder?

Experiment 4: (*a*) Mix a teaspoonful of baking powder with water and boil it; (*b*) mix soda and cream of tartar with water, and boil. What does the baking powder contain not present in the others? Prove it in another way.

Experiment 5: (*a*) Put some baking powder into a test tube and add water to it; hold the mouth of the test tube near the mouth of another test tube containing lime water, and note the effect on the lime water; (*b*) try the same experiment, using marble and acid in place of the baking powder; (*c*) breathe through a glass tube into lime water.

No attempt was made in these experiments to give the children an understanding of the chemistry of baking powder. The results that they obtained led to the following simple conclusions:

1. Cream of tartar tastes sour and has the same effect as familiar acids.
2. Soda tastes "soapy" and has an effect opposite to that of acids.
3. Some gas comes from soda when water is put on it, and much more when vinegar or cream of tartar is added. No gas is obtained from cream of tartar and water. Baking powder and water give the gas abundantly.
4. Baking powder does not change litmus paper at all, and has little taste.
5. Soda is used for baking powder because a gas can be obtained from it. Cream of tartar is used to set free the gas, and to take away the taste of the soda.
6. This same gas is given off from the breath, and from marble.
7. Baking powder contains starch.

The question of why the dough made from wheat flour should be the lightest is the next point for discussion. The children have made mixtures of corn starch and water, corn meal and water, and flour and water, noting the consistency of each mixture. Experiments with the washing of gluten from

the flour will be the next work undertaken, and after that the making of yeast bread.

Physical training (Carl J. Kroh).—May and June: Class-rooms, regular practice order. Gymnasium and outdoors (see seventh and eighth grades). Play periods: volley-ball, dodge-ball, battle-ball, etc. Outings to the parks. Sack-relays between files—passing of sacks with changes in alignment; link-chase. Forms of antagonistics, pushing and pulling, standing and moving about, hopping. Outdoors: high and broad jumping, pole-vaulting, quoit-pitching. Sports.

French (Lorley A. Ashléman).—

AU CLAIR DE LA LUNE.

Le chœur.
Au clair de la lune,
C'est là le couplet
Qu'en léger costume
Arlequin chantait.
Cherchant qui l'abrite
Contre le verglas,
Il errait sans gîte,
Un panier au bras.

Arlequin.
"Au clair de la lune,
Mon ami Pierrot,
Prête-moi ta plume
Pour écrire un mot.
Ma chandelle est morte,
Je n'ai plus de feu:
Ouvre-moi ta porte
Pour l'amour de Dieu!"

Le chœur.
Au claire de la lune
Pierrot répondit:

Pierrot.
"Je n'ai point de plume,
Je suis dans mon lit.
Mais va chez Léandre,
Bien sûr, il y est;
J'entends dans sa chambre
Qu'on bat le briquet."

Le chœur.
Au claire de la lune
S'en fut Arlequin
Tenter la fortune
Au logis voisin.

Arlequin. "Léandre, ouvrez vite!
J'ai mon pauvre nez,
Tant le froid l'irrite,
Tout enchifrené."

Le chœur. Au clair de la lune
Léandre en bon cœur,
A, sans crainte aucune,
Ouvert au chanteur.

Léandre. "Entre, camarade!
Charmé de te voir,
Pour ton nez malade
J'ai juste un mouchoir."

Le chœur. Au clair de la lune
Arlequin transi,
En soignant son rhume,
Répond ——

Arlequin. "Grand merci!
Moi, pour notre veille,
J'apporte un pâté
Et cette bouteille
De vin cacheté!"

Le chœur. Au clair de la lune
Pierre les entendait;
Mais, dans l'ombre brune,
Le chat qui rôdait . . . .
Avait de son maître
Happi le rôti
Et par la fenêtre
Le voilà parti!

The fifth grade sang with dramatic action and in costume "Au clair de la lune" for morning exercise. While memorizing the "Ronde" many of the verses were taken for dictation. All the verbs of the first conjugation were conjugated in the present and imperfect tenses, negatively and affirmatively.

REVIEW FOR MARCH.

(FRANCIS W. PARKER SCHOOL.)

WILLARD STREETER BASS.

History.—After the class had compared the social and industrial conditions in Virginia with those in New England, each pupil wrote a story of boy life in one or the other colony. Each pupil read his story before the class, which was

allowed to criticise it. The criticisms were directed, first, to the historical possibility of the story and, secondly, to the clearness with which it was told.

The following story is the longest and the most elaborate one written. The interest of the writer in it is shown by the fact that she wrote a great part of it at home, although no such suggestion had been made by the teacher. The only changes made here from the pupil's copy are the corrections of one or two mistakes in spelling, two omissions, and two slight changes for the sake of clearness.

THE STORY OF A NEW ENGLAND BOY AND HIS VISIT TO VIRGINIA.

John Winthrope was a little New England boy who lived on the coast of Massachusetts. The house in which he lived was a frame house with a large attic.

Downstairs was a kitchen, a "spare room" (which was never used except on state occasions), and two bedrooms.

The east end of the house was used only for a kitchen and dining-room. Here was a fireplace which measured ten feet by seven. There was a settle on either side of the fireplace, and here John would sit on Sunday evenings and read *Pilgrim's Progress*.

Adjoining the kitchen was a pantry in which were kept butter, cheese, and milk, and it saved Goodwife Winthrope many a trip to the well where she would have kept her butter to keep it cool.

At the back of the house was a cellar with a trap door leading to it. In the cellar were bins for apples and vegetables. Great golden pumpkins and squashes were lying around on the floor.

John had an elder brother who helped on the farm, and a smaller sister.

On week days John went to a school two miles away, which was kept by Master Wadsworth. Sometimes Master Wadsworth would tell the boys to take down the old muskets from the wall, and then he would drill his little company for an hour or so. He thought that some day his boys would have to fight, and not only against the Indians, but against their king.

One day, a hot, uncomfortable day, John's father came running in and told his wife that a message had come from his cousin in Virginia to come and visit him and bring the boy (he meant John) along, as he had a lad somewhat older than John who would like to make his acquaintance. Goodman Winthrope said they would start in a week, and as John needed a new suit he would shear a white sheep and a black one right away. This he did, and he brought it to his wife, who carded it with the help of John's sister.

Next day she sat to work to spin it. A neighbor came in, and while she told her news she spun a great deal. After spinning the wool she wove it in this manner: She threaded her loom, and then she wove first a black thread and then a white one, making what was called "pepper-and-salt" goods.

This done, she cut it into shape and sewed it, and John had a new suit in which to go traveling.

Goodman Winthrope knew of a sailboat which was going to a little settlement south of the Potomac river, and he got a passage on her.

From the mouth of the Potomac they made their way on foot to the house of their cousin.

The first night they had to camp out, as there was no house near. But as John had been trained to endure things like this, it only made him the more hardy.

About noon the next day they arrived at their cousin's house. John thought the house would be like that of his father in Massachusetts, but no one can imagine his surprise at seeing a large stone house among the trees.

After the noon meal was over, George (John's cousin) said: "The slaves have said that there are some wandering tribes from over the mountains encamped but a short distance from here, about seven or eight miles away. Let us go to them and see if we can get some wampum."

So he ordered the horses to be brought, and they rode away.

When they had ridden about three miles, George drew rein on his horse. "What is the matter?" asked John.

"I think we have been riding in the wrong direction, for you see there are no Indians here, and so let us go more toward the south."

They had been riding due east; now they turned and rode more toward the south.

It was getting rather late, and John said they had better go home, but George said: "We will get to some camp soon, and we can send a messenger to my father to tell him that we shall stay all night." So they rode on.

They did not realize how far they had gone, and darkness came on so quickly that before they knew it they were in total darkness.

"Now what shall we do?" It was George that spoke.

"We will have to camp out, it seems," answered John.

"But father will be anxious," said George.

"Your father will very probably send some slaves to look for us. We will build a fire, and they can see it and come to us."

This plan was agreed upon, and they dismounted, and John built a fire while George tried to tether the horses to a tree. He did not succeed, however, for he was so used to being waited on that he had not learned to wait on himself.

John came to his aid, and they were soon seated around their fire and talking contentedly.

"Tell me of your home life, for as yet I have not noticed much of it," said John.

"I go to a school on week days, and I play athletic games with other gentlemen's sons, as you do very likely," George answered.

"Nay, I hardly ever play, as father thinks it childish," said John. "But proceed, tell me of your house. How many rooms has it?"

"As you have most likely seen," replied George, "my father is rich. I

do not wish to boast, but he is, and he hired some ships and loaded them with stone slabs which he bought in England, and they sailed to Virginia, and then sailed up the Potomac river to the land which belongs to my father, and here they deposited their burden on the shores. Now father hired skilled men to build a mansion such as had been his in England.

"After a while mother and I came over, and she brought with her tapestry, linen, dishes, feather beds, and everything to make a comfortable home."

As he ended, John drew a long breath. "Such luxuries are not known in New England," he said. "But tell me, how many rooms does your house contain?"

"In the lower apartment there is a large hall for festivities, and there are also three sleeping-rooms and three other rooms which are used for entertaining company when there is such. Also upstairs are a great many sleeping-rooms, and"—he paused—"I impart it to you alone, there are three secret chambers of which no one knows excepting father, mother, and myself. Here it is that father keeps his money—all of the valuable things, in fact; and now that you know it, it must be forever a secret."

As he ended, they heard the horses snort and paw the ground as if frightened.

"What makes the horses so restless?" asked John.

"Probably a wolf or some other animal. We need not be frightened," answered George.

"Well, who said I was?" thought John, although he said nothing.

Finally both awoke, to find both arms and legs bound so that they could not move.

"Where am I?" exclaimed John, raising himself with an effort. He looked around and saw George bound in the same way.

He glanced around and saw a great many hideously painted Indians.

"What does this mean?" he cried fiercely, struggling to free himself.

At this moment George awoke and, staring around in a dazed way, saw John and asked him what was the matter and why they were bound.

John was about to answer when one of the Indians stepped forward and said in broken language that they were going to hold them for ransom, and they had already dispatched a runner to notify the people at the "big house."

The boys were made to get up and walk to a camp a mile or so away, and here they were treated kindly, but they were kept under a strong guard.

George, who understood a little Indian language, told John that, judging from what he heard, the runner had not yet returned.

That night both boys were awakened by a voice close to their ears telling them to rise.

When they opened their eyes they saw an Indian maiden who told them again to rise and follow her. She also told them that she had put their guards sound asleep, and that they could now escape if they were quick.

The boys followed her, and she led them into the clear moonlight. At the edge of the village they found two horses waiting, and, thanking the girl again and again, they rode home.

MARGARET PRUSSING.

The remainder of the work in March followed closely the outline presented on p. 553 in the March number of the ELEMENTARY SCHOOL TEACHER.

Geography.—The geographic work in connection with history was the study of the topography of New York, especially of the Hudson and Mohawk river system. The pupils knew of the Dutch boast of having obtained a better location for commerce than the English had in either New England or Virginia. They read what they could about the present commerce of New York, in Carpenter's *North America*, and found that the boast was entirely justifiable. We then set to work to find the reasons for the commercial supremacy of the city. The excellent harbor was at once mentioned as one, and a very important, reason; but, as good harbors alone do not create large cities, we decided to look for further reasons. The pupils studied relief maps of the Appalachian mountains, and the teacher, working under their direction, modeled on the large sand table a map of the northern part of this chain. From this map it was evident that the lowest and easiest path over the mountains was through the valley of the Mohawk. This was of immediate advantage to the Dutch, as it gave them easy access to a region affording a very profitable fur trade. Later, the lowness of this route made the Erie canal possible, and by the transportation which was thus afforded New York's development increased by leaps and bounds. At the present time, when railroads instead of canals are the controlling factor in commerce, the valley of the Mohawk is occupied by a great railroad connecting New York with the West.

The character of the Hudson valley was studied from pictures, and a laboratory experiment was devised to show the method of its formation and to account for the presence of so many islands in the harbor. The experiment was performed in the same sink described in the last number of this magazine. Sand was placed in one end of the sink as before, and a spray of water allowed to fall upon it until well-defined rivers were formed. The level of the outlet was then raised, and the water flowed up the river valleys, partially submerging them. Each pupil wrote a paper describing the results he observed. One of them is here printed:

ONE WAY OF MAKING ISLANDS.

First there is a continent. Then it begins to rain. The rain makes rivers, and the rivers carry down sand and make deltas. In the continent some sand is soft and some is hard. The rain washes the soft sand down,

and the hard sand is left up making mountains. Next the water rises up around the mountains and makes islands.—*Norman Preble.*

Nature study.—The excursion of the class to the gas-works in January led to the question: "How can gas be made from coke, which contains no gas, and from water, which is not a gas?" The answer which had to be given at the time, that the gas comes from the steam, really explained nothing to the class, and it was believed that a more elaborate explanation, while sure to lead to other questions beyond the reach of the fifth grade, would nevertheless prove profitable. The following experiments were undertaken:

Water was decomposed by electrolysis, and the two gases which were available for the manufacture of water gas were thus made apparent to the class. We called the two gases oxygen and hydrogen, and proceeded to make them by other methods and in larger quantities in order that we might discover some of their properties.

The class went to the laboratory, and each member made oxygen by the usual method of heating a mixture of manganese dioxide and potassium chlorate. Each pupil then burned a substance—wood, charcoal, sulphur, or some other—in his oxygen, while the rest of the class watched.

On account of the greater difficulty in manipulating the apparatus for making hydrogen, only one lot was made and that under the immediate direction of the teacher. The usual experiments for showing the lightness, the combustibility, and the explosiveness of hydrogen were performed. [Directions for these may be found in any text-book on chemistry. Those in Williams's *Introduction to Chemical Science* are clear and simple.] Lastly, a dry glass vessel was placed over a jet of burning hydrogen, and the water formed by its combustion was collected in the form of fog, which soon formed drops and ran down on the glass.

The discussion of this experiment was the most interesting part of this work. To the question, "Where does the water on the glass come from?" the class replied, "From the burning hydrogen;" and then one pupil inquired, "What else is there in water besides hydrogen?" It was recalled that we had also obtained oxygen from water by electrolysis. Then came the question, "What is there in water besides hydrogen and oxygen?" This was immediately repeated in another form: "What was there left after we had taken the hydrogen and oxygen out of the water?" The electrolysis experiment could furnish no answer to this question, as the diminution in the volume of water in making any moderate amount of the gases is too small to be measured. Apparatus for the quantitative union of oxygen and hydrogen not being at hand, we returned to the experiment of burning hydrogen in air.

The teacher asked, "If hydrogen burning in air forms water, what can there be in water besides hydrogen and oxygen?" "Nitrogen," replied the class. The light of a new discovery shone in the face of one of the pupils. "There *is* nitrogen in water," said he, "and that's the reason that it puts out fire."

We knew that nitrogen and oxygen exist side by side in the air and do not unite. We tried to see whether hydrogen would unite with nitrogen by making a jar of nitrogen and inserting a jet of burning hydrogen in it. The hydrogen was immediately extinguished. This convinced the class that nitrogen, having such a strong disinclination to unite with either oxygen or hydrogen, would probably not unite with the two and so would not be found in water. The next day, however, one pupil was back with the declaration that, although hydrogen would not burn in nitrogen, he thought that the nitrogen might enter the combination while hydrogen was burning in air. As there is no *a priori* reason why it should not, we were compelled to leave the matter with the statement, which one of the pupils brought from home, that oxygen and hydrogen are the only constituents of water.

This rather long account of the above discussion has been written to show that fifth-grade children are capable of rather close thinking upon problems usually reserved for higher grades, or sometimes for the high school.

Notwithstanding the degree of thought-power shown by the pupils, there were only one or two in the class who had or who acquired sufficient manual dexterity to manage successfully all the apparatus necessary in the above experiments. The teacher, therefore, is of the opinion that these experiments on the permanent gases would be more profitable if performed two or three years later, when the individual pupil could perform all the experiments for himself.

Number.—Few problems in number were involved in the work in nature study, and the number work for the month was mainly drill problems in fractions.

SEVENTH GRADE.

READING LESSON IN GERMAN.

EDUARD PROKOSCH.

PARZIVAL.

KÖNIG GAMURET von Anjou war ein ritterlicher Held, der lieber in fernen Ländern kämpfte, als zu Hause ausruhte. Er fiel im Dienste des Chalifen von Bagdad in einer Schlacht. Seine Frau verliess ihren Palast und floh mit ihrem kleinen Sohne Parzival in die Waldeseinsamkeit, damit dieser nichts vom Ritterthume höre, das seinem Vater den Tod gebracht hatte.

Einmal begegnete der Knabe im Walde einem Ritter in glänzender Rüstung. Er hielt ihn für Gott, denn seine Mutter hatte ihm gesagt, Gott sei heller und glänzender als der Tag. Als der Ritter ihm sagte, dass König Artus zum Ritter mache,

wollte er hinaus in die Welt, um König Artus zu suchen und ein Ritter zu werden. Seine Mutter wollte ihn nicht ziehen lassen, aber er bestand darauf. So gab sie ihm Narrenkleider, damit er überall verlacht werde und bald zu ihr zurückkomme.

Aber Parzival kam nie wieder zurück, und seine Mutter starb vor Kummer.

Parzival fand bald den Hof des Königs Artus. Ein Ritter in roter Rüstung verlachte ihn wegen seines Anzuges; Parzival tötete ihn mit seinem Wurfspeer und trug von da an seine Rüstung. Wegen seiner Tapferkeit machte ihn König Artus zum Ritter, aber Parzival wusste noch nichts von ritterlichen Sitten. Als er von Artus' Hofe fortzog, kam er zu dem alten, erfahrenen Ritter Gurnemanz. Dieser gab ihm viele gute Lehren für sein Verhalten. Eine der Lehren war, er solle nicht viel fragen, das sei unhöfisch.

Parzival zog weiter und kam in das Reich der Königin Condwiramur, die von Feinden bedrängt wurde. Durch seine Tapferkeit wurden ihre Feinde besiegt, und sie heiratete Parzival. Aber bald erfasste ihn Sehnsucht nach seiner Mutter, und er verliess Condwiramur und seine zwei kleinen Söhne, um seine Mutter zu suchen. Auf dem Wege kam er in eine prächtige Burg, deren Herr, Amfortas, an einer schweren Wunde litt. Beim Mahle wurde eine Schale aus einem einzigen Edelstein hereingetragen, welche leuchtete wie die Sonne und unerschöpflich Speise und Trank spendete. Aber Parzival dachte an Gurnemanz' Lehren und fragte weder nach diesem Wunder, noch nach der Ursache der Wunde des Amfortas.

Am nächsten Morgen zog er fort und kam bald an den Hof des Königs Artus. Dort erschien aber eine Botin des Amfortas und sagte ihm unter Schmähungen, dass jene Burg die Gralburg gewesen sei. Hätte er gefragt, was das alles bedeutete, so wäre er ihr König geworden. Aber nun verdiene er nicht unter Rittern zu sitzen.

Von nun an irrte Parzival fast fünf Jahre umher, um den heiligen Gral wiederzufinden.

An einem Karfreitag, als Schnee auf dem Weg lag und Parzival trotz der Kälte im Eisenkleid einherritt, begegnete ihm ein

alter Ritter mit seinem Weibe und zwei Töchtern, alle barfuss, im grauen Büssergewande. Der Alte klagte, dass Parzival den heiligen Tag durch Waffentragen entweihe. Er riet ihm, einem heiligen Manne, der in einem nahen Walde lebte, seine Sünden zu beichten. Parzival hatte sich in all den letzten Jahren nicht um Gott gekümmert, aber der alte Ritter erweckte in ihm die Hoffnung, dass Gott ihm helfen werde. Daher ging er zu dem Einsiedler; dieser war Tevrezent, der Bruder seiner Mutter und des Amfortas. Fünfzehn Tage blieb der Held bei ihm, dann wies ihn Tevrezent auf den rechten Weg zur Gralburg. Dort tat Parzival die Frage nach dem Gral und nach der Wunde des Amfortas. Da genas dieser und erzählte ihm, dass er durch den vergifteten Speer eines Heiden verwundet worden sei. Die Wunde sei nicht geheilt, weil er den Regeln des Gral ungehorsam gewesen sei. Nun solle Parzival an seiner Stelle König des Gral sein. Auch seine Gattin Condwiramur und seine beiden Söhne, die er fünf Jahre nicht gesehen hatte, wurden auf die Burg geholt.

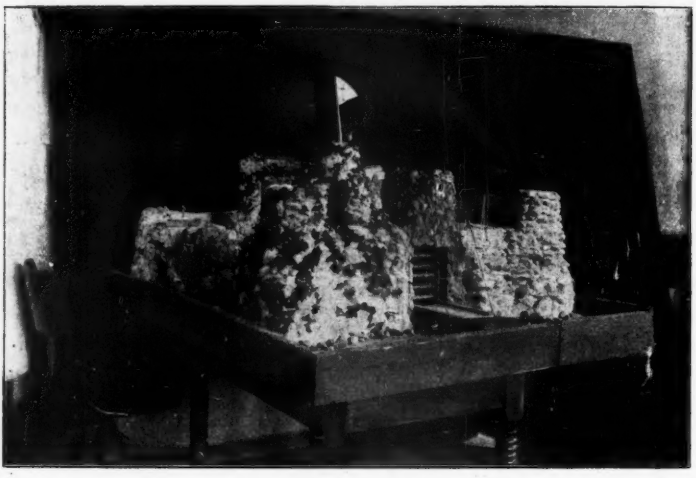
Physical training (Carl J. Kroh).—May, June: Free gymnastics (gymnasium): development of short series of exercises involving varied combinations of gymnastic action-forms; theme-work, selected with reference to forms of apparatus work, as preparatory, or related work—to facilitate aptitude in execution, and promptness in response, in fundamental work. Boys: boxing, continued; movements forward, backward, and sideward (stepping and body movements); evasion. Girls: dancing calisthenics, polka and waltz steps; utilization of tactics in figure-marching. (Morning exercises: spring roundelay; stepping exercises with song accompaniment.) Apparatus gymnastics (boys): Horizontal bars and beams, rings: changes of position from hang-rest (leg-rests next grasp) to "stem"-support; grasp-changes, and forward circles; "up-" and "off-swings." Side-horses: changes of mounts, from position to position; practice of fore- and back-swings in connection with changes of position; high off-swings from sitting and balance-mounts; simple forward vaults over croups, necks, and saddles. Vaulting bucks: stride-vaults in connection with quarter and about facings. (Girls): Chest-bar exercises; slow arm extensions in hang-support position, arms flexed; use of traveling rings; upward traveling on slant-beams; stepping forms, with accompanying arm and body movements, on balancing beams.

REVIEW: HISTORY.

(FRANCIS W. PARKER SCHOOL.)

ELIZABETH ADAMS.

IN our study of the Middle Ages we have tried to see the varied home life of the period, to picture existence in country and town, in monastery and castle. In addition to using pictures and descriptions we have read several stories, varying in range



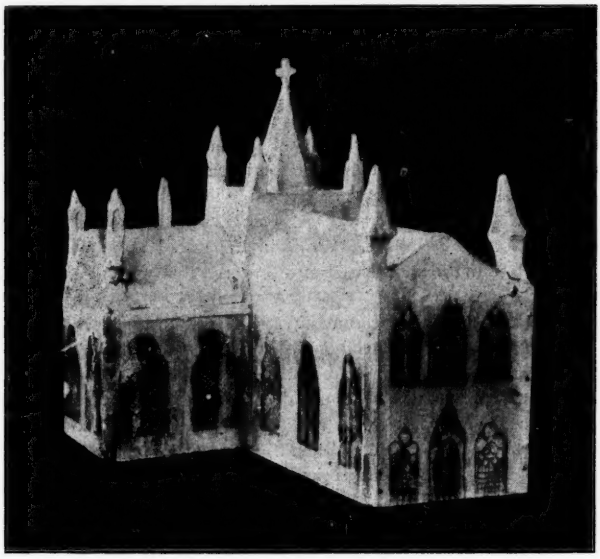
THE CASTLE.

from "Gilbert" in *Ten Boys on the Road from Long Ago to Now* to Robert Barr's *Tekla*. From the latter, perhaps, the children received the most vivid impressions of the different classes of society and of the life and work of each class. They enjoyed the book greatly, and one of the boys expressed the wish that we might build a castle. As he evidently voiced the sentiments of the class, we at once began the discussion of ways and means.

Different materials were suggested for construction, but as nothing short of stone met the approval of the class, we decided to get pebbles from the lakeshore, which is half a mile away. From a building across the street, which was being remodeled, we secured mortar.

We put our structure on a deal table, but, in order that it might be moved about and so used in different rooms, we saw that it must be built in sections. Accordingly, we made a platform of foot boards by laying on the table four strips each three feet long.

Plans for the buildings included an inclosing wall, protected by a moat, drawbridge, portcullis, and towers; an inner castle, the "keep," and a cruci-



THE CHAPEL.

form chapel. After adapting these plans to our space and limitations, we divided the work, one pupil making the drawbridge, another the portcullis, others the catapults, while groups of two or three worked together on sections of the wall. In all the work we preserved correct proportions as far as possible. We soon found that certain parts of the structure required more time than we had supposed, hence, as different pupils finished their allotment, they worked on whatever remained unfinished.

We built the keep on a separate board, and, after finishing it, lifted it within the outer wall. Its roof was made of clay in which pebbles were imbedded. The chapel, in which the doors and windows were traced by burning, was made of wood, with roof and towers of clay.

The moat was made by gluing silver paper, crumpled to make it look more like water, on the platform outside the walls. The platform was framed

in by vertical strips of board, the inner and upper surface of which formed the outer bank of the moat. To give this wall the appearance of a bank of earth it was coated with glue, then quickly sprinkled with sand and pebbles.

The drawbridge is raised and lowered by means of strings which pass through pulleys to the inside of the wall. In a similar way the portcullis, which was made by putting pieces of wire through strips of board, can be lifted into the tower above.

We felt that our castle would be incomplete without ivy. We made a good imitation of ivy by cutting leaves from tissue paper and fastening them to fine wire. The vines stir in the slightest breath of air and add to the castle's appearance of reality.

We met with many difficulties. For example, although we tried to be careful about our measurements for the portcullis and its tower, when we came to fit them into the wall, they were too large and a part of the work had to be done over. After getting the drawbridge in place we found it too light to fall quickly. This difficulty was overcome by nailing a piece of lead to the under surface of the bridge. We soon exhausted our stock of stones, carried in a tub from the lakeshore, but discovered that we had an abundance in our own dooryard.

In the beginning of the work one boy, who had been especially interested in the life and work of the Northmen, asked if he might make a model of a viking boat, instead of helping on the castle. Permission was given, and he soon had a boat hewn out. The bow of this boat terminates in a dragon's head, the stern in a dragon's tail. The shields are cut out of copper, and hang over the sides of the boat. When the boat was completed its builder became one of the most efficient workers on the castle.

The pupils have enjoyed this castle-building and boat-making, and the work seems to have vivified their pictures of the Middle Age and to have helped to give them an intense interest in the entire period.

During the rest of the quarter we shall spend more time on the free city, and, as the handwork of this grade is printing and bookbinding, the pupils will organize themselves into guilds to carry on these handicrafts.

EIGHTH GRADE.

(FRANCIS W. PARKER SCHOOL.)

ELIZABETH ADAMS.

REVIEW: HISTORY.

THE class has studied, somewhat in detail, the different nationalities on the Atlantic coast plain at the close of the Rev-

olution; the commencement of the expansion of the American people, not only in territory, but also in trade, invention, art, and education; the history of the struggle for the possession of the Mississippi valley, and the beginning of the public domain, including the survey, organization, government, and disposal of these lands; the pushing westward of the southern frontier through the Cumberland Gap into Kentucky and Tennessee, and the movement of the northern frontier along the old Braddock road into the Northwest Territory.

A constant effort has been made to have the pupils realize the difficulties which faced the pioneers, and to picture the varied life in different localities. With these ends in view they were asked to write a story of a family migrating westward. They were allowed to choose a typical family from the southern, middle, or New England states, and to introduce whatever incidents — true to the time, place, and people — they felt to be necessary to the progress of their story. A chapter of a story was written for each recitation, and read in the class. All seemed much interested both in their own productions and in those of the other pupils. In most cases the true flavor of the times and conditions was preserved in the narratives.

The following story, one of the best, catches occasionally even the quaint style of a century ago:

A JOURNEY TO THE OHIO COUNTRY.

BEING EXTRACTS FROM THE DIARY OF EXPERIENCE HINSDALE, BEGUN IN THE CITY OF RICHMOND, VA., AT FORTY YEARS OF AGE.

CHAPTER I.

December 30, 1796. — This morning John, my husband, informed me that his great uncle, who perished during the Revolution, had been promised some lands out in the Northwest Territory, the government being too poor at that time to pay for his services in money. As we, who are the only near relatives of John's honored uncle, have been in straitened circumstances of late, my husband thinks it wise for us to move immediately to this land, which the government is about to pay.

December 31. — Today I began to pack our worldly possessions, John being desirous to move as soon as the springtime comes.

January 1, 1797. — This is the first day of the New Year, and I hope that

it will bring us good luck. Our family attended meeting this morning, and later on Mehitable, my eldest daughter, helped me in packing.

January 2.— I have learned that our lands are on the Muskingum river, near the town of Zanesville, and comprise 160 acres.

January 3.— The weather prophecies for this year, published in the Richmond *Gazette*, are that there will be an early spring, and the rest of the winter mild. If this comes true, John hopes that we shall be able to start our journey on March 1.

January 29.— John has gone to town to buy a moving-wagon, within our means, which will hold a family of six.

February 20.— John has purchased a suitable wagon, and we own three strong work horses, which can easily pull us all. We have sold the house and most of the furniture to one of our wealthier neighbors, so are free to depart as soon as possible. The prophecies in the Richmond *Gazette* of January 3 are coming true, for the snow is all gone, we are having light showers, and it is quite warm.

February 25.— I have finished my packing, and we have a long and hard journey before us. James, my eldest, is, I am glad to say, quite able to help his father a great deal. He is twenty years old. Mehitable, aged eighteen, is also very capable, and a great comfort to me; Samuel, aged ten, and Mara, aged five, are still rather wild, but I hope that this journey will serve to harden them, and teach them to work.

February 28.— Tomorrow we start. With us is going Mr. Burnett, who is also bound for Zanesville, but knows the way, having been with Mr. Zanes when he blazed his trace.

March 4.— It is now almost sunset on the evening of our fourth day. We have stopped for the night at the foot of Blue Ridge, and tomorrow's journey will be harder and slower than today's has been, although we are going to cross only the lowest part of the mountains.

March 10.— It is now 11 o'clock at night, and we have just stopped at the entrance to the Cumberland Gap. John wanted to reach there tonight, but I put the little ones to bed early.

March 13.— This has been our most unlucky day, and it seems to be a foreboding of ill, for it has snowed and become much colder. John is afraid that, if it does not get warmer, we shall have to wait a long time at the Ohio river, for it to thaw out. I thought that spring had come.

March 15.— I could not write yesterday, because I was helping John. Today the ground is covered with snow, and all the brooks are frozen. I fear there will be two more weeks of winter, which we must spend on the shores of the Ohio, where we shall soon arrive.

March 17.— We have stopped at the Ohio for a permanent stay. Our provisions will not last, but the men have brought their guns, so they can hunt.

CHAPTER II.

March 20.— Today James shot a deer, and the meat tasted very savory, in spite of the fact that the salt has given out.

March 21.— It is getting warmer, but still great cakes of ice float down the river, and after it is all gone, the Indians around here say, there will be a spring flood.

March 22.— I am in constant dread of the Indians. Three days ago John gave one of them a shilling to bring us some Indian corn, and the Indian has not appeared yet.

March 24.— Samuel has disappeared. I saw him this morning, and, as the younger ones roam about during the daytime, I have not worried about him. Now it is 9 o'clock at night, and he has not come. The men have set out with lanterns in search of him.

March 26.— Samuel has not appeared yet. One friendly Indian is helping us search.

March 27.— Tonight Wamasso, our friendly Indian, brought home the truant Samuel. But, instead of being half-starved, as I expected, he was plump and happy. After questioning him, we found that he had run off with a band of Indians traveling westward, thinking that they fared better than ourselves. It was with them that Wamasso found him and brought him back, much against his wishes.

March 28.— Last night we let Samuel sleep, but this morning John made use of the good old adage, "Spare the rod and spoil the child." Samuel will remain in the wagon for a week on bread and water. I sincerely hope that this chastisement will make him a better boy.

March 30.— John has deemed it prudent to move our wagon back from the river, which is rising rapidly.

March 31.— I know not what ails Mara. Yesterweek she went to see Wamasso's babe, who is sick with a curious rash which causes him much pain. Today she seems to have the same sort of rash.

April 2.— Mr. Burnett, who is somewhat of a doctor, thinks Mara has an attack of that dread disease called smallpox. Wamasso's babe has it much worse than she, and I pray that the Lord may spare them both. The children are kept away from her and she is unconscious.

April 6.— Today Wamasso's babe passed away from his earthly pilgrimage. John went to the curious Indian death ceremony, and saw the tiny, wasted form buried, with its toys, rattles, some food, and clothes. "For," says the poor mother, "baby feel bad without me. He take long journey to happy hunting ground. Need much food." The parents bear their troubles like Spartans. They teach me to be brave, and, if the Lord sees fit to take my youngest, I shall say, "Thy will be done."

April 8.— Mara is better. She knew me today and asked for all the children. But she needs delicate food, and as soon as possible we must push

up the Ohio toward Zanesville. The men are at work on three stout canoes and the Indians are aiding them.

April 11.— Mara improves steadily. But the floods are still very high and we cannot go for more than a week.

CHAPTER III.

April 14.— Today the floods have commenced to go down. Mara still improves, though this is the most contagious stage of the disease, so the children do not go near her. I have had it myself, so am not in danger.

April 16.— The river is almost down to its natural level. But there are frequent showers, and because of this John has made a sort of bark canopy over the canoe in which Mara will lie.

April 17.— John thinks we may embark tomorrow, as the canoes are ready.

April 18.— Today we embarked. In one canoe are John, Mara, and I. It is very comfortable, being lined with dead leaves and moss, and containing Mara's little cot. In one of the other two are James, Mehitable, and some of the provisions; and the third contains Mr. Burnett, Samuel, and more provisions. We are now stopping near shore with our canoes tied.

April 19.— It was so warm today that John moored our canoe, and tried to fish. He caught a few small fish and went ashore to cook them.

April 20.— Mr. Burnett's wife has a house in Marietta, where we shall soon arrive, and her husband wants us to stop there with her, while he, John, James, and Samuel go ahead to Zanesville and the bounty lands. This we shall probably do.

April 22.— We have just sighted Marietta, which seems to be quite a large town for this wilderness. We shall go to the house of Mrs. Burnett, and shall all spend the night there.

April 23.— This morning the men started up the Muskingum. John intends to hire some of the backwoodsmen to help him build a cabin. Our hostess is kind and hospitable.

April 25.— To be here seems almost like being back in old Richmond. There are churches, schools, and very kind people. I do not approve of the frivolities in which they indulge, for example, their frequent balls and parties.

April 30.— Today was Sunday, and we went to church. The Rev. Mr. Breck gave a very good discourse on Psalm XXIII.

May 3.— Today John came to get us. He has built a cabin, and we shall go tomorrow.

May 6.— I am now writing from our new home, where we have just arrived. We came in a queer boat, called a keel boat. Mara is much better. We have a nice little house with three rooms, and John is planting a garden. I know that we shall be prosperous.

FINIS.

CATHERINE DELANO.

MORNING EXERCISES.

KATHARINE M. STILWELL.

		LEADER.
May 1.	Dante	Miss Deratt
2.	Current Events	Miss Curtis
6.	What Makes a Good School?	Mr. Jackman
7.	Songs	Mrs. Bradley
8.	"The Story of the Potter"	Miss Hollister
9.	Games	Miss Allen
13.	Rug-Making	Miss Wygant
14.	Songs	Mrs. Bradley
15.	The Garden	Miss Mitchell
16.	The Moon and the Weather	Mr. Myers
20.	A Bird Day	Mr. Meyers
21.	Songs	Mrs. Bradley
22.	The Sugar Bounty and Reciprocity with Cuba	Miss Baber
23.	Stories of Trees	Miss Langley
27.	"Versailles"	Mlle. Ashléman
28.	Songs	Mrs. Bradley
29.	Decoration	Miss Fleming

HISTORICAL EVENTS AND BIRTHDAYS.

May 1.	Joseph Addison	1672
4.	Horace Mann	1796
13.	W. H. Prescott	1796
13.	Founding of Jamestown	1607
20.	Albrecht Dürer	1471
20.	Christopher Columbus	1440
22.	Alexander Pope	1688
25.	Ralph Waldo Emerson	1803
25.	Lord Lytton	1801
27.	Dante	1265
27.	First Telegraph Message Sent	1844
28.	Thomas Moore	1480
28.	Agassiz	1835
29.	Patrick Henry	1736
30.	H. Rubens	1577
30.	Decoration Day	

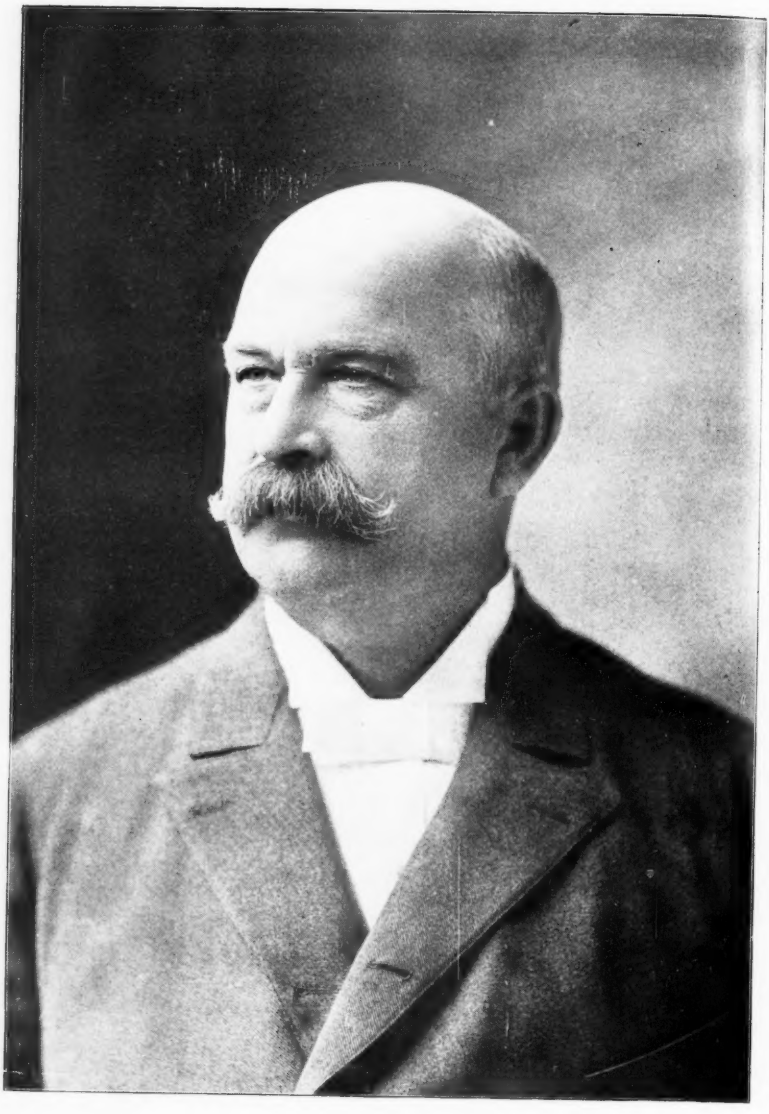
NEW PUBLICATIONS.

Eclectic School Readings. Ten Common Trees. By Susan Stokes, department of biology, high school, Salt Lake City. Size, 5 × 7½ in.; pp. 108.

The Discovery of the Old Northwest and its Settlement by the French. By James Baldwin, author of "Baldwin's Readers," "The Story of Siegfried," "The Book Lover," etc. Pp. 272. American Book Co.

Graded Classics. By M. W. Haliburton and F. T. Norvell. Size, 5½ × 7½ in.; colored pictures. First Reader, pp. 143; price, 30 cents. Second Reader, pp. 190; price, 35 cents. Richmond, Va.: B. F. Johnson Publishing Co.

Graded Literature Readers. Edited by Harry Pratt Judson, LL.D., dean of the faculties of arts, literature, and science, University of Chicago; and Ida C. Bender, supervisor of primary grades in the public schools of Buffalo, N.Y. Size, 5 × 7 in.; pp., First Book, 128; Second Book, 192; Third Book, 232; Fourth Book, 262; Fifth Book, 260; Sixth Book, Seventh Book, Eighth Book, each 256. New York: Maynard, Merrill & Co.



Francis W. Parker